

## SOMETHING NEW UNDER THE SUN: THE DRECP AND UTILITY-SCALE SOLAR ON THE NEW ENERGY FRONTIER

Brent Resh\*

*“It is time for legal scholars, legislatures, and municipal governments to dust off the Solar Law Reporters of the 1970s and embark upon a new effort to create a better governance framework for renewable development. Without this framework, the laws that develop naturally in response to technological change will fill the gaps but will fall far short of their potential. While we may not need a ‘dramatic’ theory here, we should begin to anticipate the steps that will lead us toward a more sustainable world.”<sup>1</sup>*

*“Existing laws and regulations are often inappropriate to the needs of specific solar technologies; just as the legal system adapted to the use of automobiles and electronic communication, it must evolve as solar technology comes into widespread use.”<sup>2</sup>*

*The Desert Renewable Energy Conservation Plan (DRECP) is a programmatic intergovernmental, interagency effort to spur development of utility-scale renewable-energy infrastructure in the deserts of southern California. As a vertical and horizontal collaboration across multiple levels of government, the DRECP presents a compelling example by which to illustrate and evaluate Hannah Wiseman’s proposed “regional renewable governance” and “hybrid regional governance” solutions to the problems of fragmentation associated with the development of large-scale solar infrastructure. Although not regional in the sense that Wiseman proposed (its reach is limited to seven counties in California), the DRECP is nonetheless relevant to Wiseman’s proposed governance frameworks for renewable-energy development due to the number of entities and levels of government involved and the complexity of California’s regulatory environment. This Note addresses the effectiveness of the DRECP in terms of Wiseman’s renewable-governance framework in the context of large-scale solar-energy development in California.*

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\* J.D. Candidate, Spring 2018, William S. Boyd School of Law, J.D.; Duke University, Environmental Sciences, B.S. 2011. I would like to thank Professor Bret Birdsong for his invaluable help in formulating the topic of this Note. His guidance and comments were instrumental. I would also like to thank each of my colleagues on the Nevada Law Journal who had a hand in the painstaking process of editing, reviewing, and bringing this Note to publication. © 2017 Brent Resh.

<sup>1</sup> Hannah Wiseman et al., *Formulating a Law of Sustainable Energy: The Renewables Component*, 28 PACE ENVTL. L. REV. 827, 906 (2011).

<sup>2</sup> Harold M. Hubbard, *Foreword*, 3 SOLAR L. REP. xvii, xviii (1981).

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## INTRODUCTION

“[I]nnovations never happen as planned. . . .”<sup>3</sup>

In 2011, the Obama administration described its vision for the future of renewable energy development as the “New Energy Frontier.”<sup>4</sup> The U.S. Department of the Interior (Interior Department) issued a report outlining a concerted effort by several administrative agencies, including the Bureau of Land Management (BLM) and the Department of Energy (DOE), to “standardize and streamline the authorization process for solar energy development projects” and “develop a suite of solar energy environmental policies and mitigation strategies that would apply to the deployment of DOE-supported solar energy projects, whether located on BLM-administered lands or other Federal, state, tribal, or private lands.”<sup>5</sup> Part of this plan included the pre-screening of public lands for qualities of technical suitability for utility-scale solar energy development.<sup>6</sup> For various reasons, the BLM determined that tracts of public land located in six states, including California and Nevada, contain the most suitable sites for developing large-scale solar infrastructure.<sup>7</sup> Although the BLM’s early efforts to incentivize the development of these “Solar Energy Zones” had their fair share of setbacks and critics, the BLM pushed forward.<sup>8</sup>

In September 2014, the Interior Department announced the release of the draft Desert Renewable Energy Conservation Plan (DRECP).<sup>9</sup> As a collaborative effort between multiple federal and California agencies, the proposed DRECP intended to “protect areas in the California desert important for wildlife, recreation and other uses while streamlining permitting in areas appropriate for siting of solar, wind and geothermal energy projects and associated transmission.”<sup>10</sup> In September 2016, the BLM completed the first phase of the

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<sup>3</sup> GIFFORD PINCHOT III, *INTRAPRENEURING: WHY YOU DON’T HAVE TO LEAVE THE CORPORATION TO BECOME AN ENTREPRENEUR* 16 (1985).

<sup>4</sup> See generally U.S. DEP’T OF INTERIOR & U.S. DEP’T OF AGRIC., *NEW ENERGY FRONTIER: BALANCING ENERGY DEVELOPMENT ON FEDERAL LANDS* (2011) [hereinafter *NEW ENERGY FRONTIER*].

<sup>5</sup> *Id.* at 18.

<sup>6</sup> See *id.*

<sup>7</sup> *Id.* (Arizona, California, Colorado, Nevada, New Mexico, and Utah).

<sup>8</sup> See Nathaniel Logar, Note, *When the Fast Track Hits the Off Ramp: Renewable Energy Permitting and Legal Resistance on Western Public Lands*, 27 *COLO. NAT. RESOURCES, ENERGY & ENVTL. L. REV.* 361, 373–79 (2016).

<sup>9</sup> Press Release, U.S. Dep’t of the Interior, U.S. Department of the Interior and State of California Release Draft Desert Renewable Energy Conservation Plan for Public Review (Apr. 26, 2016), <https://www.doi.gov/news/pressreleases/us-department-of-the-interior-and-state-of-california-release-draft-desert-renewable-energy-conservation-plan-for-public-review> [https://perma.cc/Q6ZD-D8CS]. See generally U.S. BUREAU OF LAND MGMT. ET AL., *DRAFT DESERT RENEWABLE ENERGY CONSERVATION PLAN: EXECUTIVE SUMMARY* (2014) [hereinafter *DRAFT DRECP: EXECUTIVE SUMMARY*].

<sup>10</sup> Press Release, *supra* note 9.

DRECP by approving its *Land Use Plan Amendment*<sup>11</sup> (LUPA) to manage renewable development and conservation on ten million acres of federal lands in the DRECP plan area.<sup>12</sup> As it stands today, the DRECP remains incomplete;<sup>13</sup> however, the DRECP reflects a monumental, eight-year-long undertaking by multiple agencies across all levels of government, and it therefore deserves attention and scrutiny as lawmakers, regulators, and local governments make further progress in its implementation. Moreover, as “the most ambitious and innovative planning effort undertaken in the California desert,”<sup>14</sup> the DRECP will surely serve as an example for other state and regional plans to follow.

Solar power is here to stay,<sup>15</sup> and increasing our reliance on solar technologies will have many benefits.<sup>16</sup> Solar technologies have come a long way since the days of the Solar Law Reporters and President Jimmy Carter’s White House solar panels,<sup>17</sup> but institutional and legal innovations are needed to support

<sup>11</sup> U.S. BUREAU OF LAND MGMT., DESERT RENEWABLE ENERGY CONSERVATION PLAN: LAND USE PLAN AMENDMENT TO THE CALIFORNIA DESERT CONSERVATION AREA PLAN, BISHOP RESOURCE MANAGEMENT PLAN, AND BAKERSFIELD RESOURCE MANAGEMENT PLAN (Sept. 2016), [http://drepc.org/finaldrepc/lupa/DRECP\\_BLM\\_LUPA.pdf](http://drepc.org/finaldrepc/lupa/DRECP_BLM_LUPA.pdf) [<https://perma.cc/XGL3-JM93>] [hereinafter DRECP LUPA].

<sup>12</sup> Cal. Energy Comm’n, *What Is the DRECP?*, DRECP, <http://drepc.org> [<https://perma.cc/AU36-RMBH>] (last visited Oct. 25, 2017).

<sup>13</sup> As of September 14, 2016, Phase II of the DRECP had not been completed. See Helen O’Shea & Ralph Cavanagh, *Conservation, Clean Energy and Climate Leadership*, NRDC (Sept. 14, 2016), <https://www.nrdc.org/experts/helen-oshea/conservation-clean-energy-and-climate-leadership> [<https://perma.cc/X53H-2PND>].

<sup>14</sup> *Id.*

<sup>15</sup> See, e.g., Nishtha Chugh, ‘Trump Can’t Stop Renewables Energy Growth at Home or Abroad,’ FORBES (Jan. 31, 2017, 2:15 PM), <http://www.forbes.com/sites/nishthachugh/2017/01/31/trump-cant-stop-renewables-energy-growth-at-home-or-abroad/#21d3c035d884> [<https://perma.cc/K4PY-2UBR>]. Utility-scale solar facilities are currently cost competitive with coal and natural-gas power plants, at least to the extent that a substantial tax-credit incentive for utility-scale solar development remains intact. Philip Warburg, *In Clash of Greens, a Case for Large-Scale U.S. Solar Projects*, YALE ENV’T 360 (Aug. 24, 2015), [http://e360.yale.edu/features/in\\_clash\\_of\\_greens\\_a\\_case\\_for\\_large-scale\\_us\\_solar\\_projects](http://e360.yale.edu/features/in_clash_of_greens_a_case_for_large-scale_us_solar_projects) [<https://perma.cc/8552-3L2J>].

<sup>16</sup> See, e.g., Robert Glennon & Andrew M. Reeves, *Solar Energy’s Cloudy Future*, 1 ARIZ. ENVTL. L. & POL’Y 91, 93–94 (2010) (noting the potential for solar energy projects to create new “green collar” jobs); Garrick B. Pursley & Hannah J. Wiseman, *Local Energy*, 60 EMORY L.J. 877, 901–07 (2011) (explaining the benefits of energy entrepreneurship on the economy and environment).

<sup>17</sup> In 1979, President Carter had thirty-two water-heating solar panels installed on the roof of the White House in the wake of the recent national energy crisis, commenting,

[A] generation from now, this solar heater can either be a curiosity, a museum piece, an example of a road not taken, or it can be a small part of one of the greatest and most exciting adventures ever undertaken by the American people; harnessing the power of the sun to enrich our lives as we move away from our crippling dependence on foreign oil.

DAVID R. BOYD, *THE OPTIMISTIC ENVIRONMENTALIST: PROGRESSING TOWARDS A GREENER FUTURE* 22–28 (2015).

growth in this promising sector of energy development.<sup>18</sup> As demonstrated by the many setbacks solar technology and law have faced to get where they are today, whether legal or technological,

Innovations do not proceed smoothly from defining goals through planning to implementation of the plan. Despite the apparent rationality of later recountings, *innovations never happen as planned* because no one can accurately plan something that is really new! Instead, the early stages of innovation consist of groping toward a vision, counting one's progress by what can be learned from mistakes, until at last one grasps a pattern worth repeating.<sup>19</sup>

As the law continues to adapt to accommodate solar technology, even incomplete and imperfect legal innovations such as the DRECP provide lawmakers and regulators with patterns worth repeating and others worth discarding.<sup>20</sup> The DRECP has yet to prove an effective solution to the many administrative barriers and legal hurdles facing utility-scale solar development. But even assuming it "only holds a candle in sunshine,"<sup>21</sup> the DRECP provides another instance of patterns worth repeating and is therefore very much "something new under the sun."<sup>22</sup>

Solar power need not be "an example of a road not taken."<sup>23</sup> Both past and future technological breakthroughs have the potential to reshape the American Southwest's energy landscape, but the "New Energy Frontier" will remain unexplored, and its potential unrealized, unless technological advancements are accompanied by commensurate legal advancements.<sup>24</sup> Such needed breakthroughs and innovations are not only possible: *they are probable*. After all, the "[a]bility to change in the face of new circumstances is one of the great strengths of our system of law[.]"<sup>25</sup> and "[l]aw perennially chases human needs."<sup>26</sup>

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<sup>18</sup> Hubbard, *supra* note 2, at xvii. *See generally*, e.g., Glennon & Reeves, *supra* note 16; Wiseman et al., *supra* note 1.

<sup>19</sup> PINCHOT, *supra* note 3 at 16.

<sup>20</sup> *See* Hannah Wiseman, *Expanding Regional Renewable Governance*, 35 HARV. ENVTL. L. REV. 477, 514–15 (2011).

<sup>21</sup> This colorful phrase is from a prose poem, WILLIAM BLAKE, *THE MARRIAGE OF HEAVEN AND HELL* (Dover 1994) (1794).

<sup>22</sup> *See generally* J.R. MCNEILL, *SOMETHING NEW UNDER THE SUN: AN ENVIRONMENTAL HISTORY OF THE TWENTIETH-CENTURY WORLD* (2000). *Contra generally* Ecclesiastes 1:9 (King James). Despite the Book of Ecclesiastes rather glum admonition that "[t]he thing that hath been, it is that which shall be, and that which is done is that which shall be done, and there is no new thing under the sun," *id.*, the history of environmentalism over the past fifty years seems to suggest just the opposite.

<sup>23</sup> *See* BOYD *supra* note 17 at 22.

<sup>24</sup> *See* Hubbard, *supra* note 2; *see also* Glennon & Reeves, *supra* note 16; Wiseman et al., *supra* note 1.

<sup>25</sup> Hubbard, *supra* note 2 at xvii.

<sup>26</sup> Wiseman et al., *supra* note 1, at 827.

## I. THE PROBLEM

*“We pay a high price when we inadvertently create anticommons. . . .”*<sup>27</sup>

America’s New Energy Frontier can help displace America’s reliance on foreign oil and replace energy imports with energy independence. Many opportunities exist on this new renewable energy frontier, but this Note will focus on utility-scale solar development in California and the problems such development faces. Section A uses the Ivanpah facility to illustrate issues associated with utility-scale solar development. Section B provides an overview of relevant property theory, defines “anticommons property” and “regulatory anticommons,” and provides illustrations thereof. Section C describes how and why utility-scale solar projects exhibit qualities of anticommons property and implicate regulatory-anticommons problems, especially in California.

A. *Envisioning the Problem*

*“Most persons do not see the sun.”*<sup>28</sup>

Anyone who has recently driven Interstate 15 near the California-Nevada state line would recognize a utility-scale solar facility: The Ivanpah Solar Electric Generating Facility (Ivanpah) consists of over 300,000 software-controlled “heliostat” mirrors which reflect and focus sunlight onto boilers atop three 459-foot-tall towers.<sup>29</sup> It produces enough electricity to power more than 140,000 homes,<sup>30</sup> and it is impressively expansive. Covering over five square miles of federal land near the California-Nevada border,<sup>31</sup> Ivanpah illustrates the scale and nature of the problems associated with developing utility-scale solar projects both in California and in general.

As one drives by this gleaming oasis in the middle of the desert, many questions arise, the answers to which are not immediately apparent: Is it in California?—Nevada?—Or both?<sup>32</sup> Is it on state or federal land?<sup>33</sup> Where does the

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<sup>27</sup> Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 688 (1998).

<sup>28</sup> RALPH WALDO EMERSON, *Nature*, in THE ESSENTIAL WRITINGS OF RALPH WALDO EMERSON 5–6 (Brooks Atkinson ed., 2000) (1836).

<sup>29</sup> *Ivanpah Project Facts*, BRIGHT SOURCE ENERGY, <http://www.brightsourceenergy.com/ivanpah-solar-project#.WdwYN62ZPEa> [<https://perma.cc/U9UY-GMTA>] (last visited Oct. 25, 2017). Ivanpah uses “concentrating solar power” (CSP) technology, a form of “solar thermal power” technology, rather than photovoltaic solar panels to produce electricity. See Dialogue, *Nuts and Bolts of Technology: Closer Look at Utility-Scale Solar Power*, 41 ENVTL L. REP. NEWS & ANALYSIS 10401, 10403–04 (2011); see also *Ivanpah Project Facts*, *supra*.

<sup>30</sup> *Ivanpah Project Facts*, *supra* note 29.

<sup>31</sup> See *id.*; see also *infra* note 148 (discussing the scale of Ivanpah to that of other solar facilities in the region).

<sup>32</sup> Ivanpah is located entirely in California. *Ivanpah Project Facts*, *supra* note 29.

electricity go?<sup>34</sup> Are those bursts of smoke fireworks?<sup>35</sup> What is even less immediately apparent upon gazing at Ivanpah is another question lurking in the background—one which pertains to the invisible legal reality implicit in such more obvious questions about the massive \$2.2 billion facility<sup>36</sup>: how, exactly, did it get there?

Even ignoring the economic hurdles in such a highly competitive market as that of the energy industry, developing a utility-scale solar facility involves expensive and time consuming regulatory compliance. Long before a utility-scale facility can begin to generate electricity in California, its developers will face the setbacks of a complex legal and regulatory process—a cloud that may involve numerous private-property rights, overlapping jurisdictions, conflicting local ordinances and zoning codes, duplicative state and federal laws and regulations, contentious opposition from neighbors, incompatible public and private interests, and more. These invisible clouds lurking over the development of utility-scale solar facilities, however invisible one may be to the casual passerby of such a facility, have both expected and unexpected consequences—consequences commensurate to the scale of the facilities themselves.

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<sup>33</sup> Ivanpah is exclusively on federal lands. Brian Skoloff & Michael R. Blood, *Huge Solar-Thermal Plant Opens Near Nevada-California Border*, L.V. REV. J. (Feb. 13, 2014, 2:18 PM), <http://www.reviewjournal.com/business/huge-solar-thermal-plant-opens-near-nevada-california-border> [<https://perma.cc/TUW8-UF9M>].

<sup>34</sup> The electricity goes exclusively to California. *Ivanpah Project Facts*, *supra* note 29.

<sup>35</sup> Sadly, no. In fact, “[A]bout 6,000 birds die from collisions or immolation annually while chasing flying insects around the facility’s three 40-story towers[.]” Louis Sahagun, *This Mojave Desert Solar Plant Kills 6,000 Birds a Year. Here’s Why That Won’t Change Any Time Soon*, L.A. TIMES (Sept. 2, 2016, 3:00 AM), <http://www.latimes.com/local/california/la-me-solar-bird-deaths-20160831-snap-story.html> [<https://perma.cc/HYQ8-RN6F>]. The facility’s workers have a name for the puff of smoke left by immolated birds: “Streamers.” *Id.* This Note does not intend to make light of a serious problem: For a discussion about the impact of renewable energy on birds and other animals, see Logar, *supra* note 8, at 367–68 (discussing impact of renewable-energy infrastructure on birds), and see generally Alexandra B. Klass, *Energy and Animals: A History of Conflict*, 3 SAN DIEGO J. CLIMATE & ENERGY L. 159, 182–95 (2012).

<sup>36</sup> See generally Glennon & Reeves, *supra* note 16, at 105–11 (discussing the economics of solar energy and problems associated with solar generated energy competing with more cheaply produced electricity in the competitive energy market); Cassandra Sweet, *Ivanpah Solar Plant May Be Forced to Shut Down*, WALL. ST. J. (Mar. 16, 2016, 7:27 PM), <https://www.wsj.com/articles/ivanpah-solar-plant-may-be-forced-to-shut-down-1458170858> [<https://perma.cc/LE6K-3C5Q>] (discussing the facility’s problems in generating a sufficient amount of energy to meet its quotas).

B. *The Panoply of Anticommons Clouds*

*“The spectre of anticommons problems looms large in the multi-layered US regulatory framework.”*<sup>37</sup>

Garret Hardin published his seminal environmental essay, *The Tragedy of the Commons*,<sup>38</sup> in 1968.<sup>39</sup> “[E]mbraced as gospel,”<sup>40</sup> it inspired a wave of scholarship exploring new avenues of its application and efficacy.<sup>41</sup> Exploring one such tangential avenue in property theory, Michael Heller laid the modern foundation for its doppelgänger<sup>42</sup>: the “tragedy of the anticommons.”<sup>43</sup>

1. *From Commons to Property*

*“I know not what to call this, nor will I urge, that it is a secret overruling decree that hurries us on to be the instruments of our own destruction, even though it be before us, and that we rush upon it with our eyes open.”*<sup>44</sup>

Hardin illustrated what he coined the “tragedy of the commons” with a now famous scenario: numerous herdsmen fattening their cattle on communal open-access pasture.<sup>45</sup> The “tragedy” in this situation is the tendency for the land to be ultimately overgrazed.<sup>46</sup> As the story goes, each herdsman is presumably rational and therefore aware of the negative utility of the cumulative effects of maintaining more and more cattle.<sup>47</sup> Nonetheless, the immediate benefit, to each herdsman, of maintaining more and more cattle is too enticing an opportunity to pass up: “[T]he rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another [etc.] . . . Therein is the tragedy.”<sup>48</sup>

Hardin attributed this tragic tendency toward collective ruin to rather bleak conclusions about human nature. According to Hardin, the tragedy of the com-

<sup>37</sup> Giuseppe Bellantuono, *The Regulatory Anticommons of Green Infrastructures*, 37 EUR. J. L. ECON. 325, 343 (2014).

<sup>38</sup> Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968).

<sup>39</sup> Jonathan H. Adler, *Property Rights and the Tragedy of the Commons*, THE ATLANTIC (May 22, 2012), <https://www.theatlantic.com/business/archive/2012/05/property-rights-and-the-tragedy-of-the-commons/257549> [<https://perma.cc/Y36Y-6QDJ>].

<sup>40</sup> Reza Dibadj, *Regulatory Givings and the Anticommons*, 64 OHIO ST. L.J. 1041, 1047 (2003).

<sup>41</sup> See Frank van Laerhoven & Elinor Ostrom, *Traditions and Trends in the Study of Commons*, 1 INT’L J. COMMONS 3–6 (2007).

<sup>42</sup> Lee Anne Fennell, *Common Interest Tragedies*, 98 NW. U. L. REV. 907, 907 (2004).

<sup>43</sup> See generally Heller, *supra* note 27.

<sup>44</sup> DANIEL DEFOE, ROBINSON CRUSOE 53 (Evan R. Davis ed., Broadview Press modernized ed. 2014) (1719).

<sup>45</sup> See Hardin, *supra* note 38, at 1244; see also Adler, *supra* note 39.

<sup>46</sup> See Hardin, *supra* note 38, at 1244; see also Adler, *supra* note 39.

<sup>47</sup> Hardin, *supra* note 38, at 1244; see also Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 354 (1967).

<sup>48</sup> Hardin, *supra* note 38, at 1244.

mons is inevitable,<sup>49</sup> most solutions are either ineffective or otherwise “objectionable,”<sup>50</sup> and the only truly effective and lasting solution is population control (of humans, not their cattle).<sup>51</sup> However, two schools of thought emerged to challenge Hardin’s prophesy of environmental doomsday: regulation<sup>52</sup> and privatization.<sup>53</sup> In fact, one year before Hardin published *The Tragedy of the Commons*, Harold Demsetz laid the cornerstone for the latter school of thought in his seminal article, *Toward a Theory of Property Rights*,<sup>54</sup> which discussed the commons as a problem of economics. Demsetz illustrated his theory with a discussion of a theoretical primitive society’s transition from the primordial “world of Robinson Crusoe” to the modern world of property.<sup>55</sup>

Demsetz theorized that modern property rights emerged as the natural and logical result of market failures inherent in primitive systems of commons “ownership.”<sup>56</sup> According to Demsetz, private ownership tends to “internalize many of the external costs associated with [a commons],” thereby “creat[ing] incentives [for the individual owners] to utilize [the] resources [of the land] more efficiently.”<sup>57</sup> Private landowners can more efficiently reach effective agreements about how their adjacent parcels of property should be used in concert to their collective best interests because, generally speaking, private ownership necessarily means *fewer* owners—and therefore fewer decision-makers and fewer parties are required to make any meaningful agreement.<sup>58</sup> A definition of anticommons property begins to emerge here;<sup>59</sup> however, a satisfactory definition of anticommons property must first begin with a satisfactory definition of “property.”

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<sup>49</sup> See *id.*

<sup>50</sup> See, e.g., *id.* at 1245.

<sup>51</sup> See, e.g., *id.* at 1243. Hardin discusses this Malthusian conclusion throughout his essay, which includes a section entitled “Freedom to Breed is Intolerable.” *Id.* at 1246. More recent scholarship tends to focus on Hardin’s discussion of the problem as one of “externalities,” while ignoring Hardin’s more controversial assessment that the true “root” of the problem is overpopulation. See, e.g., Amy Sinden, *The Tragedy of the Commons and the Myth of a Private Property Solution*, 78 U. COLO. L. REV. 533, 546 (2007) (citing Hardin, *supra* note 38, at 1245).

<sup>52</sup> See Hardin, *supra* note 38, at 1247 (discussing favorably the regulation solution, non-ironically referred to as “[m]utual [c]oercion [m]utually [a]greed [u]pon.”); Sinden, *supra* note 51, at 533.

<sup>53</sup> See Sinden, *supra* note 51, at 533. Sinden was critical of privatization as a solution to the tragedy of the commons, see generally *id.*, as was Hardin, see, e.g., Hardin, *supra* note 38, at 1245.

<sup>54</sup> Demsetz, *supra* note 47.

<sup>55</sup> *Id.* at 347–53.

<sup>56</sup> See *id.* at 350.

<sup>57</sup> *Id.* at 356.

<sup>58</sup> See *id.* at 356–57.

<sup>59</sup> See generally Heller, *supra* note 27, at 622–24.

## 2. *From Property to Anticommons*

“Eighteen pockets in one suit! I haven’t [the] time.”<sup>60</sup>

“Property” is commonly used to refer to “[a]ny external thing over which the rights of possession, use, and enjoyment are exercised.”<sup>61</sup> However, it is more technically correct to say that “property,” in a strictly legal sense, refers to “one’s exclusive right of ownership of a thing.”<sup>62</sup> Thus, as an *exclusive* right, ownership implies exclusion: the owner, by definition, has the right to exclude any and all others from using the thing over which his property rights exist.<sup>63</sup> In light of this distinction one can better understand the difference between “the lay intuition [that] . . . Blackacre *itself* is the core of private property”<sup>64</sup> and the less intuitive idea that *the right to exclude others* from Blackacre is ultimately the core of “property.”<sup>65</sup>

Without venturing too much farther into the weeds of Blackacre,<sup>66</sup> Heller’s basic definition of anticommons property is sufficient for the purposes of this Note: anticommons property is any external thing over which “multiple owners are each endowed with the right to exclude others from a scarce resource, and no one has an effective privilege of use.”<sup>67</sup> According to Heller, anticommons property is both a species of private property and distinguishable from private property. It is like private property in that all of its owners have rights of exclusion; however, it is unlike private property in that such rights of exclusion are not exclusive—each owner has the right to exclude not only all non-owners, *but also all of the other owners*.<sup>68</sup> This latter feature is the hallmark of anticommons property.<sup>69</sup> The more owners there are, the more difficult is for them to reach any unanimous agreement, the lack of which ultimately results in the

<sup>60</sup> A.A. MILNE, WINNIE-THE-POOH 92 (1954).

<sup>61</sup> *Property*, BLACK’S LAW DICTIONARY (10th ed. 2014).

<sup>62</sup> *Id.*

<sup>63</sup> *See, e.g.*, Heller, *supra* note 27, at 624 n.9.

<sup>64</sup> Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1170 (1999).

<sup>65</sup> Although this overly simplistic characterization is sufficient for the purposes of this Note, the concept of private property is in fact much more complex, nebulous, and amorphous than this Note’s characterization might imply. *See generally id.*

<sup>66</sup> *See generally, e.g.*, William W. Buzbee, *Recognizing the Regulatory Commons: A Theory of Regulatory Gaps*, 89 IOWA L. REV. 1, 15, 15 n.43 (2003) (citing Carol Rose, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 DUKE L.J. 1, 3 n.4) (noting frequent confusion in distinguishing between property as used to describe both ownership and the thing that is the object of ownership); *see also, generally, Property*, BLACK’S LAW DICTIONARY, *supra* note 61 (noting that there are two meanings associated with the word “property,” one that is used to refer to the right of ownership as “property,” and one that is used to refer to the object of ownership (e.g., land) as “property”).

<sup>67</sup> Heller, *supra* note 27, at 624.

<sup>68</sup> *See id.*

<sup>69</sup> This problem is essentially one of organization. *See id.* at 670–71 (describing the distinction between private and anticommons property in terms of vertical and horizontal organization of the property rights).

under-utilization and inefficient use of the land and its resources.<sup>70</sup> Herein lies the tragedy of the anticommons.<sup>71</sup>

### 3. Exclusion-Equivalent Interests

“[T]he precise definition of [property] rights can be somewhat fuzzy.”<sup>72</sup>

Property rights alone are insufficient to explain the full complexity of the anticommons problems pertaining to the development of utility-scale solar projects. As proposed by Reza Dibadj in the context of “regulatory givings,” the features of an anticommons may emerge in circumstances that do not involve property rights.<sup>73</sup> Dibadj’s interpretation relied on Wesley Hohfeld’s theoretical work on “jural correlatives,” which Hohfeld used to conceptually frame property rights in terms of equivalent legal duties, and vice versa.<sup>74</sup> According to Hohfeld, “[I]f X has a *right* against Y that he shall stay off the former’s land, the correlative (and equivalent) is that Y is under a *duty* toward X to stay off the place.”<sup>75</sup> Dibadj applied this logic as meaning, “[I]f you have a *right* to prevent me from hiking in the national forest, then I have a *duty* to stay off it. Note that you do not necessarily need to have a property interest in the forest [itself]; you merely need to have some right [or equivalent interest] to exclude me.”<sup>76</sup> Thus, Dibadj arrived at his more expansive, more “fuzzy” definition of anticommons: the “legal regime where the Hohfeldian right to exclude is created without granting the ‘bundle of rights’ that constitutes property.”<sup>77</sup>

If non-property-based interests are functionally indistinguishable from property-based rights and otherwise fit Heller’s structural definition of an anticommons,<sup>78</sup> then it follows that a broader definition of “anticommons”—one which includes both property-based rights of exclusion and their functional equivalents—will more fully reflect the complexity of the problems facing utility-scale solar development.<sup>79</sup> Mimicking Dibadj’s logic in the context of

<sup>70</sup> See *id.* at 624. Recall that the tragedy of the commons involved problems of overutilization of resources.

<sup>71</sup> For a fascinating discussion of one extreme example of a tragedy of the anticommons in American history, see generally *Hodel v. Irving*, 481 U.S. 704 (1987).

<sup>72</sup> Dibadj, *supra* note 40, at 1049.

<sup>73</sup> *Id.* at 1050.

<sup>74</sup> *Id.* at 1048 (citing Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE L.J. 16 (1913)).

<sup>75</sup> *Id.* (quoting Hohfeld, *supra* note 74, at 32).

<sup>76</sup> *Id.*

<sup>77</sup> *Id.* at 1050.

<sup>78</sup> Heller defined “anticommons property” primarily in terms of the *structure* of exclusion rights, with an emphasis on the effect of exclusion (i.e. competing, horizontal rights without any hierarchy). See *Heller*, *supra* note 27, at 665.

<sup>79</sup> See Bellantuono, *supra* note 37, at 330–31; Wiseman, *supra* note 20, at 505–06; see also Dibadj, *supra* note 40, at 1049–51. This Note will henceforth refer to this broader definition as simply an “anticommons.” This definition of anticommons includes the same characteris-

solar energy development means the following: If you have any legal, statutory, or regulatory interest (a cause of action, etc.) that can be exercised to forestall the development of my solar energy project on this parcel of private, state, and/or federal lands, then you have the functional equivalent of a property right in the parcel. Accordingly, as a voting member of the anticommons oligarchy governing the use of the parcel, your single dissenting vote can veto any and all others. Herein lies the broader tragedy of the anticommons: the compounding effect of adding legal and regulatory exclusion-equivalent interests to an already gridlocked decision-making process that lacks any effective hierarchy of authority and is already overcrowded with property-based exclusion rights.<sup>80</sup>

#### 4. Regulatory Anticommons

*“Finding an ‘optimal’ regulatory arrangement is always a difficult task.”<sup>81</sup>*

William Buzbee coined the phrase “regulatory commons” to describe his theory of regulatory “gaps”: that “the ‘regulatory commons’ problem creates predictable incentives in complex, multi-layered political-legal contexts for social ills not to be overregulated, but to remain unaddressed, to remain gaps in regulation.”<sup>82</sup> Whereas commons and anticommons property refer to something physical and corporeal such as land, regulatory commons and regulatory anticommons refer to the abstract and ethereal concepts of regulatory gaps and regulatory overlaps.<sup>83</sup>

According to Buzbee’s theory, certain “social ills”—for instance, climate change—are uniquely difficult for entrenched, static systems of governance to manage and regulate.<sup>84</sup> The features that make such social ills “unique” in this context can vary widely and are generally not definable without reference to their specific facts and circumstances;<sup>85</sup> however, certain categories of regulatory subject matter—for instance, environmental and natural resource management—more frequently create regulatory-commons problems than do many other regulatory challenges.<sup>86</sup> What is dispositive of a regulatory commons is a characteristic that becomes apparent only when the specific social ill is juxta-

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tics of anticommons property mentioned in *supra* Section I.B.2. The only difference is the inclusion of exclusion-equivalent interests.

<sup>80</sup> See generally MICHAEL HELLER, *THE GRIDLOCK ECONOMY: HOW TOO MUCH OWNERSHIP WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES* (2008).

<sup>81</sup> Buzbee, *supra* note 66, at 56.

<sup>82</sup> *Id.* at 5.

<sup>83</sup> Buzbee distinguished the regulatory-commons problem from Heller’s anticommons-property problem as follows: “Where Heller focuses on fragmented real property [rights] as creating incentives for underinvestment in such property, [Buzbee] looks at . . . fragmented political-legal structures that do not match a social ill in cause or effect . . . and thereby prompt political underinvestment [in regulation].” *Id.* at 6.

<sup>84</sup> See *id.* at 5–6.

<sup>85</sup> See *id.* at 8, 22–23.

<sup>86</sup> See *id.* at 8.

posed against the system of governance and/or legal framework available to regulate it.<sup>87</sup> Buzbee calls this principal characteristic a “mismatch.”<sup>88</sup>

This “mismatch” arises where a particular problem poses a unique regulatory challenge, and the system of governance available to address the problem is uniquely inadequate to reach any effective solution. Such mismatches frequently involve problems that impact multiple jurisdictions or governments, each of which is either unwilling or unable to effectively coordinate their independent, and individually ineffective, regulatory frameworks.<sup>89</sup> The typical result of such a mismatch, and the defining feature of a regulatory commons, is that the problem goes unsolved: the consequences of the problem fall through the cracks, the “regulatory gaps,” in a framework of governance ill equipped to address the unique challenge posed by the problem.<sup>90</sup> Buzbee illustrated his theory with several examples, one of which was climate change.<sup>91</sup>

What ultimately defines the tragedy of the regulatory commons is any single jurisdiction’s ineffective control of the social ill causing the need for regulation in the first place.<sup>92</sup> However, the purpose of regulation is not limited to the control of social ills; rather, regulation is an attempt to strike a balance between maximizing social benefits and minimizing the social ills associated with the enjoyment of those social benefits.<sup>93</sup> For example, in the context of Hardin’s communal pasture, an ideal regulatory regime would maintain the maximum number of cattle on the pasture (i.e., the maximum economic yield of the pasture) and minimize the social ill of overgrazing.<sup>94</sup> In this example, the tragedy of the regulatory commons is the ineffective minimization of overgrazing.<sup>95</sup>

By contrast, the regulatory anticommmons describes the opposite problem: the mismatch of the available governance structure and the challenge posed by maximizing social benefits to each jurisdiction involved leads to suboptimal social benefits for all jurisdictions involved.<sup>96</sup> In a regulatory anticommmons, the problem is neither too little, nor too ineffective, nor even too much regulation: the problem is the uncoordinated, overlapping, and duplicative regulations of

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<sup>87</sup> See *id.* at 13–14.

<sup>88</sup> *Id.* at 6–7.

<sup>89</sup> See *id.* at 22–27.

<sup>90</sup> See *id.* at 5.

<sup>91</sup> See *id.* at 8–13.

<sup>92</sup> See *id.* at 22, 27.

<sup>93</sup> See Lea-Rachel Kosnik, *River Basin Water Management in the U.S.: A Regulatory Anticommmons*, 5 ENVTL. & ENERGY L. & POL’Y J. 365, 378–79 (2010).

<sup>94</sup> See *id.*; see also, e.g., Buzbee, *supra* note 66, at 8–10 (discussing aquaculture as one example of a commons that, as a result of attempts to privatize the commons for the benefits of privatization, gives rise to regulatory commons).

<sup>95</sup> See Kosnik, *supra* note 93, at 380.

<sup>96</sup> See *id.*; see also Buzbee, *supra* note 66, at 7 (“Social ills confronting regulatory commons dynamics will often go unaddressed, but when presented in a crisis setting, fragmented potential regulators may simultaneously find incentives to act, perhaps in stringent and duplicative ways.” (emphasis added)).

multiple jurisdictions.<sup>97</sup> The net result—and the hallmark of a regulatory anti-commons—is not the presence of regulatory gaps, but rather the presence of regulatory *overlaps*.<sup>98</sup> Thus, while a regulatory commons is defined by regulatory gaps that lead to ineffective control of social ills, a regulatory anticommmons is defined by regulatory overlaps that lead to suboptimal social benefits.<sup>99</sup>

### C. *Parts, Plots, and Parcels of Sunshine*

*“Those who are ignorant of Geology, find no difficulty in believing that the world was made as it is; and the shepherd, untutored in history, sees no reason to regard the green mounds which indicate the site of a Roman camp, as aught but part and parcel of the primæval hill-side.”*<sup>100</sup>

The previous Section explored how the qualities of anticommons property are ultimately dependent on the species and arrangement of rights in the property.<sup>101</sup> This section discusses three related topics specific to utility-scale solar facilities. Subsection One discusses the various species of property rights in solar energy access. Subsection Two discusses the unique nature of sunlight and its capture, and how these two features define a more specific form of what Hannah Wiseman called “renewable parcels”<sup>102</sup>—what this Note calls “solarsheds”—a concept that begins to explain the jurisdiction-component of the problem. Subsection Three extends Wiseman’s concept to what this Note calls the “solar-project parcel”—to more fully illustrate the problem’s complexity.

#### 1. *Owning (Part of) the Sun*<sup>103</sup>

*“[A]ll sun is not created equal.”*<sup>104</sup>

The idea that one could “own” sunlight seems somewhat odd and even counter-intuitive. Even after centuries of property-rights proliferation,<sup>105</sup> no

<sup>97</sup> See Kosnik, *supra* note 93, at 380; see also Bellantuono, *supra* note 37, at 328–34.

<sup>98</sup> Kosnik, *supra* note 93, at 380.

<sup>99</sup> Compare Kosnik, *supra* note 93, at 380, with Buzbee, *supra* note 66, at 5, 7.

<sup>100</sup> THOMAS H. HUXLEY, *Criticisms on “The Origin of Species,”* in DARWINIANA: ESSAYS 80, 106 (1896).

<sup>101</sup> See *supra* Section I.B.

<sup>102</sup> See, e.g., Wiseman, *supra* note 20, at 499.

<sup>103</sup> The title of this Subsection is taken from a short e-book, J. SILVER, OWNING THE SUN (2016) (ebook), available at <https://www.amazon.com/Owning-Sun-J-Silver-ebook/dp/B01KJ951MS> [<https://perma.cc/85AM-WR87>].

<sup>104</sup> JAYME JENKINS & BILLIE BROWNELL, GARDEN RULES: THE SNAPPY SYNOPSIS FOR THE MODERN GARDENER 59 (Billie Brownell et al. eds., 2011).

<sup>105</sup> Various rights to access sunshine have been recognized by several legal and land-planning regimes dating back to antiquity. See Sara C. Bronin, *Solar Rights*, 89 B.U. L. REV. 1217, 1218–19 (2009); Alexandra B. Klass, *Property Rights on the New Frontier: Climate Change, Natural Resource Development, and Renewable Energy*, 38 ECOLOGY L.Q. 63, 96–97 (2011).

layperson today would readily conceive that someone might “own” the sunlight striking her face—even though that same person would have virtually no doubt that *someone* must own the land she was standing on. After all, sunlight is a “universally abundant resource[.]”<sup>106</sup> Modern American law largely reflects this hesitation to recognize sunlight as something that can be privately owned, bought, and sold.<sup>107</sup> Nonetheless, many states protect solar access as a private property right.<sup>108</sup> Just how, exactly, does one “own” access to sunlight? Although the answer varies by state,<sup>109</sup> the most common approach involves an easement and/or servitude on real property.<sup>110</sup> Other approaches involve various forms of leases, permits, and even statutory restrictions on certain real-property interests and conveyances.<sup>111</sup>

For instance, both California and Nevada have statutes recognizing “solar easements.”<sup>112</sup> A solar easement is created through a voluntary agreement between two owners of neighboring parcels of real property, that one owner will not use his land in any way (e.g., build a skyscraper) that would interfere with the other landowner’s ability to collect and convert sunlight into useable energy and heat.<sup>113</sup> However, once the agreement is made and various statutory requirements are met,<sup>114</sup> the created easement is much more than any typical contract: the easement and/or servitude “will run with the land.”<sup>115</sup> In other words, the first owner’s obligation not to interfere with the neighboring parcel’s access to sunlight will pass to any subsequent owner of the first parcel—as will the neighbor’s right to enforce that obligation.<sup>116</sup> Thus, the neighbor—and any fu-

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<sup>106</sup> Wiseman, *supra* note 20, at 499.

<sup>107</sup> See Bronin, *supra* note 105, at 1222–23.

<sup>108</sup> Klass, *supra* note 105, at 95.

<sup>109</sup> See generally Klass, *supra* note 105, at 95–102.

<sup>110</sup> Klass, *supra* note 105 at 101–02 tbl.1 (listing states by type of solar-access protection).

<sup>111</sup> See Klass, *supra* note 105 at 97.

<sup>112</sup> Klass, *supra* note 105, at 97, 101 tbl.1; see also CAL. CIV. CODE § 801.5 (West 2007); NEV. REV. STAT. § 111.370 (2015).

<sup>113</sup> Klass, *supra* note 105, at 97. Some scholarship has questioned the sufficiency of solar easements in certain circumstances, particularly when no voluntary agreement between private parties can be reached. See, e.g., Sara C. Bronin, *Modern Lights*, 80 U. COLO. L. REV. 881, 911 (2009); see also, e.g., CAL. CIV. CODE § 801.5. Currently the solar easements recognized by California and Nevada are tied to use of statutorily defined technology. See CAL. CIV. CODE § 801.5; NEV. REV. STAT. § 111.375 (2015). In other words, a right to access sun for sunbathing is not an easement recognized in California or Nevada. However, unique to California are various statutory protections in place for a wide variety of solar-access rights. See, e.g., Solar Shade Control Act, CAL. PUB. RES. CODE §§ 25980–25986 (West 2016). See generally Klass, *supra* note 105, at 99–100 (discussing California’s statutory scheme for solar-access rights).

<sup>114</sup> See, e.g., CAL. CIV. CODE § 801.5(b) (listing requirements for an instrument creating a solar easement).

<sup>115</sup> Klass, *supra* note 105, at 97.

<sup>116</sup> See *id.* The first parcel is called the “servient” or “burdened” estate and the second parcel is called the “dominant” or “benefited” estate. E.g., NEV. REV. STAT. § 111.375.

ture owner of the dominant parcel—“cannot be disseized or otherwise ousted of” that right, regardless of who comes to own the servient parcel.<sup>117</sup>

California and Nevada are also among several states that have adopted statutes voiding provisions in deeds and contracts that prohibit a landowner’s use of solar technologies.<sup>118</sup> California and Nevada have also limited the ability of local governments and homeowner associations from enforcing local ordinances, zoning codes, and restrictive covenants that unreasonably affect solar energy use.<sup>119</sup> California also offers statutorily defined leaseholds and grants specifically for utility-scale solar development on state-public lands.<sup>120</sup> California also has a program for local governments to purchase and set aside public lands for solar energy use.<sup>121</sup>

Solar energy development on federal lands is subject to the Federal Land Policy and Management Act of 1976 (FLPMA),<sup>122</sup> which set various requirements for developers to acquire solar “right-of-way” authorizations to develop projects on federal lands.<sup>123</sup> Under FLPMA, the BLM issues solar right-of-way authorizations in the form of leases and grants.<sup>124</sup> Leases are issued through a competitive bidding process, while grants are issued through a non-competitive application.<sup>125</sup> Acquiring a solar right-of-way lease is a complex process that generally includes compliance with the extensive, time-consuming requirements of the National Environmental Policy Act of 1969 (NEPA).<sup>126</sup> The BLM recognized this holdup as being counterproductive to renewable energy development on federal lands. To address the issue, the BLM began conducting various efforts to both expedite development of certain areas and coordinate with

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<sup>117</sup> See, e.g., *Hyde Road Dev., LLC v. Pumpkin Assoc., LLC*, 21 A.3d 945, 948 (Conn. App. Ct. 2011).

<sup>118</sup> See *Klass*, *supra* note 105, at 101 tbl.1; see also, e.g., CAL. CIV. CODE § 714 (West 2007); NEV. REV. STAT. § 278.0208 (2015).

<sup>119</sup> See *Klass*, *supra* note 105, at 102 tbl.1; see also CAL. CIV. CODE §§ 714, 714.1; NEV. REV. STAT. § 278.0208. See generally Troy A. Rule, *Renewable Energy and the Neighbors*, 2010 UTAH L. REV. 1223 (discussing homeowner-association restrictions on small-scale solar energy systems on private property); John Wiley, *Private Land Use Controls as Barriers to Solar Development: The Need for State Legislation*, 1 SOLAR L. REP. 281 (1979).

<sup>120</sup> See, e.g., CAL. PUB. RES. CODE §§ 6501–6509 (West 2001) (general leases for use of public land); CAL. WATER CODE § 141 (2009) (allowing private entities to lease certain parts of “State Water Project” lands for installation of solar technologies).

<sup>121</sup> CAL. GOV’T. CODE §§ 51190–51192.2 (2012) (“solar-use easements”).

<sup>122</sup> 43 U.S.C. §§ 1701–1785 (2012).

<sup>123</sup> See 43 C.F.R. §§ 2806.50–2806.58 (2017) (solar right-of-ways under FLPMA). See generally Siobhan McIntyre & Timothy P. Duane, *Water, Work, Wildlife, and Wilderness: The Collaborative Federal Public Lands Planning Framework for Utility-Scale Solar Energy Development in the Desert Southwest*, 41 ENV’T L. 1093 (2011).

<sup>124</sup> See 43 C.F.R. § 2806.50.

<sup>125</sup> *Id.* § 2809.10. See generally *id.* §§ 2809.10–2809.19 (competitive-bidding process for solar and wind rights-of-way); *id.* §§ 2804.10–2804.40 (applying for FLPA grants).

<sup>126</sup> See McIntyre & Duane, *supra* note 123, at 1111. See generally National Environmental Policy Act, 42 U.S.C. §§ 4321 to 4370m–12 (2012).

regional, state, and local governments to make the compliance process more efficient.<sup>127</sup>

All such existing state and federal laws governing solar-access rights generally reflect the tension between the unique qualities of solar energy and the narrow, rigid confines of traditional property law.<sup>128</sup> To a large extent this mismatch makes sense: after all, utility-scale solar energy projects first require, as a practical matter, *land*. Without possessory estates in land, developers cannot build the technology and supporting infrastructure necessary to harness the power of sunlight. Once the necessary possessory estates are acquired, developers may, as a secondary matter, prefer to protect their investments by securing easements from surrounding land. However, this picture is incomplete: like sunlight, not all *land* is equally useful for utility-scale solar.<sup>129</sup>

## 2. *Solarsheds: Plots of Solar Energy*

*“Nature eschews regular lines.”<sup>130</sup>*

The sun may shine (nearly) everywhere, but it does not shine everywhere equally.<sup>131</sup> The quality of sunlight available for solar collection at any given location is called “solar insolation”—the rate at which energy from the sun strikes a defined unit area of the earth’s surface (usually expressed as an annual average of watts per square meter)—and it is determined by various factors, including latitude, time of day, local topography, and even local weather patterns.<sup>132</sup> Due to these geographic variations, sunlight is a “fugitive resource[]”: one must be at the right place and time to capture it.<sup>133</sup> For utility-scale capture of solar energy, the “right place” is defined by two considerations: first, where is solar irradiance intense enough to make solar-energy capture there economical; and second, where is available land amenable enough to construction of infrastructure required for solar-energy capture.<sup>134</sup> The right place in terms of the first consideration is called the “fugitive estate,” and the right place in terms

<sup>127</sup> See generally McIntyre & Duane, *supra* note 123, at 1165.

<sup>128</sup> See generally Bronin, *supra* note 113; Bronin, *supra* note 105; Klass, *supra* note 105, at 97.

<sup>129</sup> See generally Wiseman, *supra* note 20, at 479–86, 499–506; Wiseman et al., *supra* note 1, at 860–67.

<sup>130</sup> MATURIN M. BALLOU, NOTABLE THOUGHTS ABOUT WOMEN: A LITERARY MOSAIC 170 (1882) (quote attributed to John Greenleaf Whittier).

<sup>131</sup> See William B. Stine & Michael Geyer, 2. *The Sun’s Energy*, POWER FROM THE SUN, <http://www.powerfromthesun.net/Book/chapter02/chapter02.html> [<https://perma.cc/TX7F-QNYT>] (last visited Feb. 26, 2017).

<sup>132</sup> See *id.* For a map of the U.S. showing solar insolation, see Billy Roberts, *Concentrating Solar Resource of the United States*, NAT’L RENEWABLE ENERGY LAB. (Oct. 20, 2008), [http://www.nrel.gov/gis/images/map\\_csp\\_national\\_lo-res.jpg](http://www.nrel.gov/gis/images/map_csp_national_lo-res.jpg) [<https://perma.cc/S3UD-AKQ4>].

<sup>133</sup> Wiseman, *supra* note 20, at 480; see also Henry E. Smith, *Governing Water: The Semi-commons of Fluid Property Rights*, 50 ARIZ. L. REV. 445, 448 n.10. (2008).

<sup>134</sup> Wiseman, *supra* note 20, at 499.

of the second is called the “surface estate.”<sup>135</sup> Wiseman calls any theoretical region where these two nebulous estates overlap the “renewable parcel.”<sup>136</sup> This Note calls such overlapping regions “solarsheds.”<sup>137</sup>

Solarsheds help explain why solar projects tend to implicate anticommons problems. It makes sense that an overlap defined by the vagaries and vicissitudes of nature would correlate rather imperfectly with the law’s neatly delineated squares of property and jurisdiction.<sup>138</sup> Moreover, state counties are not the only jurisdictions involved in the desert southwest: there are also tracts of federal land interspersed across county and state lines.<sup>139</sup> The massive scale of utility-scale solar projects and their dependence on being located within a solarshed dictate the likelihood that many of the best sites for development will cross multiple parcels of private property and jurisdictional lines.<sup>140</sup> Herein lies a significant reason for the cloud of anticommons problems hovering over the prospects of utility-scale solar development.

### 3. *The Solar-Project Parcel*

“Give me the splendid silent sun with all his beams full-dazzling. . . .”<sup>141</sup>

This Note proposes an extension of Wiseman’s renewable-parcel concept and the solarshed concept discussed above.<sup>142</sup> Consider the perspective of a developer of a utility-scale solar project: if you wanted to develop such a project,

<sup>135</sup> *Id.*

<sup>136</sup> *Id.*

<sup>137</sup> Renewable parcels have also been called “energysheds.” See, e.g., KATE KELLY & KIM DELFINO, DEFENDERS OF WILDLIFE, SMART FROM THE START: RESPONSIBLE RENEWABLE ENERGY DEVELOPMENT IN THE SOUTHERN SAN JOAQUIN VALLEY 3 (Kate Davies & James Navarro eds., 2012), [http://www.defenders.org/sites/default/files/publications/smartfromthestartreport12\\_print.pdf](http://www.defenders.org/sites/default/files/publications/smartfromthestartreport12_print.pdf) [<https://perma.cc/268E-PKW8>] (last visited Oct. 26, 2017) (“[E]nergysheds’ [are] areas at a regional or county level that have renewable energy resources and the appropriate land, environmental characteristics and other resources with the highest potential for effective . . . renewable energy development.”). For a visual representation of solarsheds, see Nat’l Renewable Energy Lab., *Concentrating Solar Power Prospects of the Southwest United States*, OPENEI, <http://en.openei.org/w/images/0/06/NREL-csp-sw3pct.jpg> [<https://perma.cc/8CMB-3SMR>] (last visited Oct. 26, 2017) (map of locations ideal for concentrating solar technology in the southwest). For additional similar maps, including similar maps of individual states, see *Map Search*, NAT’L RENEWABLE ENERGY LAB, <http://www.nrel.gov/gis/mapsearch> [<https://perma.cc/DDX5-HH3S>] (last visited Sept. 2, 2017).

<sup>138</sup> For instance, compare the following, Map of Counties in the Southwest, WORLD ATLAS, <http://www.worldatlas.com/webimage/countrys/namerica/usstates/counties/usasmall.gif> [<https://perma.cc/5JAC-4RUK>] (last visited Oct. 26, 2017), with Nat’l Renewable Energy Lab., *Concentrating Solar Power Prospects of the Southwest United States*, *supra* note 137.

<sup>139</sup> *The Southwestern United States*, U.S. GEOLOGICAL SURV. [https://geochange.er.usgs.gov/sw/resources/sw\\_basemap/southwest\\_USA.gif](https://geochange.er.usgs.gov/sw/resources/sw_basemap/southwest_USA.gif) [<https://perma.cc/RN4V-F59Z>] (last visited Oct. 26, 2017).

<sup>140</sup> See generally Wiseman, *supra* note 20, at 499–509.

<sup>141</sup> WALT WHITMAN, *Give Me the Splendid, Silent Sun*, in *LEAVES OF GRASS* 77, 77 (1902).

<sup>142</sup> See *supra* Section I.C.2.

where would you want to build it? First, you would start with a map of available fugitive estates (i.e., a map of solar insolation in the U.S.), which would surely lead you to conclude that your ideal solar project parcel must exist somewhere in the desert southwest. Second, you narrow your focus on the desert southwest to those regions where you could actually build a utility-scale solar facility (you are now looking at a map of a solarshed, which takes into consideration not only available fugitive estates but also available land-surface estates). But your search is not done there.<sup>143</sup>

Additional parameters abound. A solar energy facility requires land for not only the solar technology itself, but also for transmission lines, roads, and other general-purpose structures, and for any other supporting apparatus the facility may require, including electrical generators, turbines, and batteries (collectively, the infrastructure parcel). The entire facility and its supporting infrastructure will exist as components of an ecosystem and larger eco-region and, as such, will impact plants and wildlife as do all other living and inanimate components of that ecosystem and eco-region (the eco-parcel). Its construction, operation, and maintenance will have a water footprint, an ecological footprint, a cultural-historical footprint, and an aesthetic footprint (each of these might be considered separately or collectively as the footprint parcel, which may span far beyond the contours of the facility itself). Finally, however remote and secluded its location may be, the solar energy facility will have neighbors, including the workers who build and maintain it, persons who live near it, and travelers who drive by or fly over it.<sup>144</sup>

A solar-project parcel is the result of such considerations and would reflect the land and resources a solar energy facility impacts and requires. A solar-project parcel should include all constituent parcels of land relevant to the facility, its construction, and its footprints—including, *inter alia*, a transmission parcel, an ecosystem estate, a water estate, and a jurisdiction estate. This perspective will direct and focus legal analysis to inform planning and assessments of large-scale solar facilities. This framework also lends itself to analysis of the anticommons problem.

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<sup>143</sup> Further considerations would include: whether existing transmission lines are present; on what land/jurisdiction (private, state, or federal) the utility-scale project will be built; and whether that land will require costly compliance with extensive regulations. As discussed in the next Section, these considerations reflect the problematic impact of the regulatory anticommons on utility-scale solar development. See generally *infra* Section I.D.

<sup>144</sup> See generally Rebecca R. Hernandez et al., *Solar Energy Development Impacts on Land Cover Change and Protected Areas*, 112 PROC. NAT'L ACADEMY SCI. U.S. 13579, 13579–84 (2015); R.R. Hernandez et al., *Environmental Impacts of Utility-Scale Solar Energy*, 29 RENEWABLE & SUSTAINABLE ENERGY REVS., 766, 768–73 (2014); Uma Outka, *The Renewable Energy Footprint*, 30 STAN. ENVTL. L.J. 241, 247–54 (2011).

*D. Anticommons Clouds, Crepuscular Development*

*“The more complex, multilayered, or fragmented the legal and political setting, the more likely it is that regulatory commons [and anticommons] dynamics will arise.”*<sup>145</sup>

Three basic issues are discussed in this Section. Subsection One offers a brief summary of the development process and anticommons problems therein by considering a theoretical solar project parcel that crosses multiple jurisdictions. Subsection Two offers an example of an existing solar project in the DRECP plan area. Finally, Subsection Three describes the impact that regulatory-anticommons problems have on solar energy development in the DRECP plan area and the significance of that impact on, perhaps surprisingly, the environment.

*1. The Anticommons Behind the Plug*

*“[E]nergy consumers prefer not to ‘look behind the plug.’”*<sup>146</sup>

Utility-scale solar projects tend to be big. For example, within the DRECP plan area, thirty-six existing<sup>147</sup> solar projects collectively cover nearly 29,000 acres—averaging out to about 800 acres per project.<sup>148</sup> By comparison, New York City’s Central Park covers 843 acres.<sup>149</sup> Just as Central Park spans many city blocks, the average-sized utility-scale solar facility tends to span many individual parcels of land.<sup>150</sup> Thus, the sheer size of most solar facilities provides the first reason for their anticommons problems. However, unlike the neatly delineated contours of central park, the contours of a typical solar-project parcel,

<sup>145</sup> Buzbee, *supra* note 66, at 22.

<sup>146</sup> Hari M. Osofsky & Hannah J. Wiseman, *Hybrid Energy Governance*, 2014 U. ILL. L. REV. 1, 3 (2014) [hereinafter *Hybrid Energy Governance*].

<sup>147</sup> “Existing” includes operational projects and projects in construction as of October 2013. U.S. BUREAU OF LAND MGMT. ET AL., DRAFT DESERT RENEWABLE ENERGY CONSERVATION PLAN app. o, at O-1 (2014) [hereinafter DRAFT DRECP]. Only solar projects with available acreage data were included in the calculations.

<sup>148</sup> *See id.* at O-2 to O-5. The largest solar-energy project spans 4,144 acres; *see id.* at O-2, while the smallest spans just 17 acres. *See id.* at O-4. Both employ photovoltaic technology. *See id.* at O-2, O-4. Of the thirty-six total solar-energy projects, all but three employ photovoltaic technology. *See id.* Excluding those three projects, projects employing PV technology have an average size of about 650 acres. *See id.* at O-2 to O-5. One of the three projects that do not employ PV technology is the Ivanpah facility (discussed in *supra* Section I.A.), which spans 3,471 acres and was the only solar-power-tower project in the DRECP plan area as of August 2014. *See id.* at O-2.

<sup>149</sup> Alex Van Buren, *12 Secrets of New York’s Central Park*, SMITHSONIAN MAG. (Jan. 27, 2016), <http://www.smithsonianmag.com/travel/12-secrets-new-yorks-central-park-180957937> [https://perma.cc/5JSU-P38G].

<sup>150</sup> *See, e.g.*, Wiseman, *supra* note 20, at 482–83.

as discussed above, are not so neatly defined.<sup>151</sup> As such, utility-scale solar facilities cannot easily be built in the middle of a large city.

Rather, solar project parcels require large swaths of mostly unoccupied lands, and such regions are frequently the most untouched by human encroachment and the most protected by environmental laws.<sup>152</sup> This latter feature triggers numerous state and federal environmental regulations—even if the project parcel occupies only private lands.<sup>153</sup> Additionally, the more remote the project site, the more difficult it may be to connect the facility to the transmission lines required to transport the generated electricity to more populated regions.<sup>154</sup> Add to the transmission issue the reality that solar facilities require workers for operations and maintenance, and you arrive at another reality: that project sites must be at least somewhat accessible—either close to, or on the outskirts of, moderately populated towns, or—at a minimum—located near a major interstate freeway or state high way.<sup>155</sup> This latter feature triggers a host of additional federal and state regulations—such as transportation regulations pertaining to freeways, highways, airports, etc. Transportation is just one of many relevant categories of laws and regulations involved. Furthermore, in addition to those many state and federal laws/regulations, there are municipal zoning codes and various local ordinances pertaining to such things as safety, noise, pollution, aesthetics, etc.—noncompliance with any of which may bring the development process to a screeching halt.<sup>156</sup>

A typical solar project has anticommons qualities by virtue of its tentacle-like spatial reach that can implicate several jurisdictions,<sup>157</sup> multiple property rights, disparate government regulations, and variegated public and private interests.<sup>158</sup> Prospective developers of such a multi-jurisdiction solar project would have to navigate each of the following potential hurdles before ever breaking ground: negotiating with owners of private property and adjacent pri-

<sup>151</sup> See *id.* at 499. See generally, *supra* Section I.C.2–.3.

<sup>152</sup> Morgan Lee, *Solar Energy Blotting Out Nature, Farms in California*, SAN DIEGO UNION-TRIB. (Oct. 19, 2015, 6:58 PM), <http://www.sandiegouniontribune.com/sdut-big-solar-big-impacts-2015oct19-story.html> [<https://perma.cc/XEB2-457Z>].

<sup>153</sup> See generally Amy Wilson Morris & Jessica Owley, *Mitigating the Impacts of the Renewable Energy Gold Rush*, 15 MINN. J. L. SCI. & TECH. 293 (2014).

<sup>154</sup> For a discussion about transmission, see generally Wiseman, *supra* note 20, and Wiseman et al., *supra* note 1, at 854.

<sup>155</sup> See *Renewable Energy Maps*, IMPERIAL COUNTY PLAN. & DEV. SERVS. (Aug. 28, 2017), <http://www.icpds.com/?pid=2934> [<https://perma.cc/V3UP-B38D>].

<sup>156</sup> See, e.g., K.K. DuVivier, *The Superagency Solution*, 46 MCGEORGE L. REV. 189, 195–96 (2014); Sarah Imhoff, Note, *A Streamlined Approach to Renewable Energy Development: Bringing the United States into a Greener Energy Future*, 26 GEO. INT'L ENV'T. L. REV. 69, 80, 87 (2013).

<sup>157</sup> Recall that the location of a solar project parcel is dependent on the availability of sunlight and land, as defined by nature. One may thus safely and reasonably assume there is a fair chance that such a parcel may cross lines of jurisdiction. This assumption is qualitative and not quantitative.

<sup>158</sup> See Wiseman, *supra* note 20, at 499–506.

vate property for any leases, licenses, or easements that may be needed; complying with all relevant laws at the federal, state, and municipal level; and acquiring final project approval from state and/or federal regulatory agencies.<sup>159</sup> Assuming the developer is successful, the project would still need to survive any so-called “not in my backyard” (NIMBY) opposition by public officials,<sup>160</sup> and any judicial challenges by representatives of tribal, environmental, and other interest groups.<sup>161</sup> Moreover, a multijurisdictional solar-project parcel is subject to overlapping regulatory requirements, which may be disparate, conflicting, and duplicative.<sup>162</sup> As more parcels of private property, more jurisdictions/governments, and more levels of governance become involved in the development process, the number and complexity of anticommons problems grow exponentially. Each of the players in that process has an exclusion-equivalent interest in the project parcel and can therefore potentially impede the project.<sup>163</sup> This complex web of parties, rights, interests, laws, and regulations contributes to an anticommons of immense proportions.

## 2. *A Solar-Project Parcel in Imperial County, California*

*“[T]he challenges of addressing a panoply of different regulations and the vagaries of unpredictable and lengthy local processes can create stifling, if not suffocating, risks that drive up costs and make it impossible for renewable energy generation to compete with conventional energy sources for investment dollars.”<sup>164</sup>*

Even solar energy facilities located entirely in one county and entirely on private land demonstrate the anticommons problem. For example, one utility-scale PV solar facility (250 MW capacity) covering nearly 3,000 acres in Imperial County required approval by five local, nine state, and two federal agencies.<sup>165</sup> This facility, Wisteria Ranch Solar Energy Center, encompasses thirty-

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<sup>159</sup> See generally Trevor D. Stiles, *Regulatory Barriers to Clean Energy*, 41 U. TOL. L. REV. 923, 925–35 (2010); Outka, *supra* note 144; Wiseman et al., *supra* note 1; Imhoff, *supra* note 156; Kevin A. James, Note, *Expediting the Permitting Process for Desert Solar Projects*, 42 MCGEORGE L. REV. 573 (2011); Brian Troxler, Note, *Stifling the Wind: California Environmental Quality Act and Local Permitting*, 38 COLUM. J. ENVTL. L. 163 (2013).

<sup>160</sup> James, *supra* note 159, at 579–80.

<sup>161</sup> See Imhoff, *supra* note 156, at 90–93; Logar, *supra* note 8, at 367–71; see also, e.g., Sammy Roth, *Solar and Wind Are Booming—Just Not in the California Desert*, DESERT SUN (MAY 8, 2017, 5:27 PM), <http://www.desertsun.com/story/tech/science/energy/2017/05/09/solar-and-wind-booming-just-not-california-desert/311540001> [https://perma.cc/UDJ7-6E MH].

<sup>162</sup> See Stiles, *supra* note 159, at 924–25; Wiseman et al., *supra* note 1, at 898–99.

<sup>163</sup> See Wiseman, *supra* note 20, at 499–506.

<sup>164</sup> DuVivier, *supra* note 156, at 195–96 (footnotes omitted).

<sup>165</sup> CTY. OF IMPERIAL, STATE OF CAL., WISTARIA RANCH SOLAR ENERGY CENTER: DRAFT EIR 1.0-7 to 11, 2.0-1 (Aug. 2014), <http://www.icpds.com/?pid=4194> [https://perma.cc/3KZZ-ZTEW] [hereinafter WISTARIA RANCH DRAFT EIR].

two parcels that were once privately owned by twelve separate landowners.<sup>166</sup> It implicated at least four federal laws, at least six state laws, multiple state and federal regulations, and numerous local land-use ordinances and zoning codes.<sup>167</sup> The approval process required the developer to submit seventeen conditional use permits (CUPS) and seventeen variance requests (to permit a maximum height of 140 feet for transmission structures in lieu of the zoning limitation of 120 feet) to the local government of Imperial County.<sup>168</sup> Additionally, the developer needed the Imperial County to approve at least fourteen other general categories of various permits, agreements, and other local requirements.<sup>169</sup> Luckily for the developer, the Wistaria Ranch project (just barely) did not cross county lines.<sup>170</sup> What one sees in existing solar-project parcels in California is an attempt to fit solar energy development, with all of its unique complexities and features, through the rigid confines of legal systems and regulatory regimes neither designed nor well equipped to effectively manage such development: the proverbial square peg through a round hole.<sup>171</sup> Wistaria Ranch would have been subject to largely different ordinances and codes at a minimum, and, at the maximum, it may not have been approved as it presently stands in Imperial County had it been considered elsewhere.<sup>172</sup>

This process is no doubt frustrating for utility-scale solar developers. For instance, the permitting and approval process for renewable-energy development within a single county in California can last as long as four years.<sup>173</sup> Selecting a project site that crosses county lines would duplicate much of what would be the already lengthy process and complex requirements of a single jurisdiction.

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<sup>166</sup> *Id.* at 2.0-2. The story is quite similar for utility-scale wind projects: one such mega wind farm (750 MW) covering nearly 10,000 acres in Kern County encompassed 604 parcels of once privately-owned land and required approval from at least eight local, four state, and three federal agencies. Troxler, *supra* note 159, at 170, n.61; *see also* CTY. OF KERN, STATE OF CAL., ALTA INFILL II WIND ENERGY PROJECT: DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT 3-1, (Aug. 2011) [http://www.kerncounty.com/planning/pdfs/eirs/alta\\_wind\\_infill](http://www.kerncounty.com/planning/pdfs/eirs/alta_wind_infill) [<https://perma.cc/75D2-V6EB>].

<sup>167</sup> *See* WISTARIA RANCH DRAFT EIR, *supra* note 165, at 1.0-8 to 1.0-13. These numbers are low estimates for whatever the true numbers may be. The Draft EIR for the project spans thousands of pages. *See generally id.* This author gave up counting through, for instance, the forty-page document describing federal, state, and local land-use laws, regulations, and ordinances covering the project. *Id.* at 4.2-1 to 4.2-40. The Draft EIR also contained forty-two pages of aesthetic analysis, *see id.* at 4.1-1 to 4.1-42, and several hundred pages of traffic-impact analysis, *see id.* at app. b, pts. 1-6 (“Draft Traffic Impact Analysis”).

<sup>168</sup> *Id.* at 1.0-2.

<sup>169</sup> *Id.* at 1.0-8.

<sup>170</sup> *Id.* at 1.0-1. For a bird’s eye view of this project parcel, *see id.* 2.0-5.

<sup>171</sup> For a map of renewable energy development in Imperial County, *see Renewable Energy Maps*, *supra* note 155.

<sup>172</sup> *See generally, e.g.*, Troxler, *supra* note 159, at 167-69.

<sup>173</sup> *See* Troxler, *supra* note 159, at 171; *see also id.* at 177-87.

### 3. *Big Solar, Big Impacts: The Effect of Anticommons in California*

“[W]e see that ‘big solar’ is competing for space with natural areas. Knowing this is vital [because t]hat’s what really drives the patchwork quilt. . . . Anyone would think that it’s quite oxymoronic that a solar energy plant could actually create or cause environmental degradation. [But t]hat’s what is happening.”<sup>174</sup>

The California Energy Commission (CEC) has been called a “superagency”<sup>175</sup> with respect to most energy development and regulation in California because its authority “supersede[s] any applicable statute, ordinance or regulation of any state, local, or regional agency, or federal agency to the extent permitted by federal law.”<sup>176</sup> It has preemption power and exclusive jurisdiction over the development of all “thermal powerplant[s],”<sup>177</sup> including “solar thermal powerplants [sic]” (e.g., Ivanpah).<sup>178</sup> However, it does not have such authority or jurisdiction over “any wind, hydroelectric, or solar photovoltaic electrical generating facility.”<sup>179</sup> As such, most solar energy projects on state and/or private land in California are regulated primarily at the county level.<sup>180</sup>

California has 58 counties, 482 incorporated cities, and 2,156 independent special districts.<sup>181</sup> It is therefore not surprising that utility-scale solar projects in California may be subject to the jurisdiction of thirty or more regulatory entities across all levels of governance.<sup>182</sup> This entanglement of overlapping authorities implicates unique issues of federalism, a concept frequently discussed in terms of a government’s “vertical” and “horizontal” power structure. “Vertical” refers to the hierarchy of governments in terms of authority and preemption power at each level of governance (e.g., federal, state, county, municipal), while “horizontal” refers to equality of governments within the same level of governance in terms of their authority (e.g., the authority of counties in relation to each other).<sup>183</sup> However, the issue of jurisdiction over solar development in California (and the regulatory anticommons problem thereby implicated) requires a more nuanced understanding of horizontal and vertical interactions

<sup>174</sup> Lee, *supra* note 152.

<sup>175</sup> See DuVivier, *supra* note 156, at 191.

<sup>176</sup> CAL. PUB. RES. CODE § 25500 (West 2016). For a discussion of how citing authority is organized in other states, see generally Steven Ferrey, *Siting Technology, Land-Use Energized*, 66 CATH. U. L. REV. 1 (2016).

<sup>177</sup> CAL. PUB. RES. CODE § 25120 (defining “thermal powerplant”); see also DuVivier, *supra* note 156, at 198–200.

<sup>178</sup> CAL. PUB. RES. CODE § 25140 (defining “solar thermal powerplant”); DuVivier, *supra* note 156, at 209.

<sup>179</sup> CAL. PUB. RES. CODE § 25120; DuVivier, *supra* note 156, at 199.

<sup>180</sup> DuVivier, *supra* note 156, at 199–200.

<sup>181</sup> INST. FOR LOCAL GOV’T, UNDERSTANDING THE BASICS OF MUNICIPAL REVENUES IN CALIFORNIA: CITIES, COUNTIES AND SPECIAL DISTRICTS 3 (2016).

<sup>182</sup> See DuVivier, *supra* note 156, at 202.

<sup>183</sup> See generally, e.g., Blake Hudson & Jonathan Rosenbloom, *Uncommon Approaches to Commons Problems: Nested Governance Commons and Climate Change*, 64 HASTINGS L.J. 1273 (2013).

across levels and types of jurisdictions<sup>184</sup> —an understanding which mirrors Heller’s discussion of the arrangement of exclusion rights in anticommons property.<sup>185</sup>

Consider the hypothetical multijurisdictional project parcel described above: assume this project parcel crosses county lines and encompasses private, state, and federal lands. This project parcel will thus implicate all vertical levels of governance: at least two county governments, multiple municipal authorities, multiple state agencies, and multiple federal agencies.<sup>186</sup> However, at least in the context of regulating solar energy development on this parcel, each of the government entities involved (across all vertical levels of governance) are functionally horizontal in their regulatory capacities. In fact, *there is no clear vertical hierarchy of governance on this project parcel.*<sup>187</sup> Such an arrangement (horizontal interests without a decision-making hierarchy) is precisely what Heller discussed as the hallmark of anticommons property,<sup>188</sup> and what Buzbee subsequently discussed as the hallmark of regulatory commons.<sup>189</sup> However, while regulatory gaps are possible with respect to specific regulatory issues, this arrangement is fundamentally anticommons in nature. Consider, for instance, CEQA and NEPA.

Virtually all utility-scale energy development in California must comply with the California Environmental Quality Act (CEQA).<sup>190</sup> Generally speaking, CEQA requires the lead agency<sup>191</sup> assigned to oversee the development of an energy project to conduct an extensive environmental review, publish an “environmental impact report” (EIR),<sup>192</sup> and hold public hearings before approving any project that “may cause a significant effect on the environment.”<sup>193</sup> CEQA was modeled on NEPA,<sup>194</sup> which imposes on federal agencies similar require-

<sup>184</sup> *Id.* at 1279–80, 1314–36; *see also* Bellantuono, *supra* note 37, at 332; Outka, *supra* note 144, at 286–97.

<sup>185</sup> *See* Heller, *supra* note 27, at 667–70.

<sup>186</sup> *See* Wiseman et al., *supra* note 1, at 831–832, 903.

<sup>187</sup> *See, e.g.,* Wiseman, *supra* note 20, at 494, 505–509.

<sup>188</sup> *See supra* Section I.B.2.

<sup>189</sup> *See supra* text accompanying note 84; *see also supra* Section I.B.4.

<sup>190</sup> *See generally* California Environmental Quality Act, CAL. PUB. RES. CODE §§ 21000–21189 (West 2016); Troxler, *supra* note 159, at 169, 172.

<sup>191</sup> Under CEQA, the lead entity can be either a state agency or a local government depending on the project. In the context of renewable-energy development, usually the lead regulatory entity that conducts the CEQA review for a particular renewable-energy project is the relevant county government. Troxler, *supra* note 159, at 172.

<sup>192</sup> *See generally CEQA Procedures for Internal CDFW Actions*, CAL. DEP’T OF FISH & WILDLIFE, <https://www.wildlife.ca.gov/Conservation/CEQA/Procedures#792162-environmental-impact-report> [<https://perma.cc/8XQE-SF53>] (last visited Oct. 26, 2017); *Chapter 36 – Environmental Impact Report*, CAL. DEP’T OF TRANSP. (June 21, 2016 11:34 AM) <http://www.dot.ca.gov/ser/vol1/sec5/ch36eir/chap36.htm> [<https://perma.cc/ADF2-LPUV>].

<sup>193</sup> Troxler, *supra* note 159, at 170, 172–173.

<sup>194</sup> *Frequently Asked Questions About CEQA*, CAL. NAT. RESOURCES AGENCY, <http://resources.ca.gov/ceqa/more/faq.html> [<https://perma.cc/HL83-6WDH>] (last visited Oct. 26, 2017).

ments, including (potentially) preparation of an “environmental impact” statement (EIS).<sup>195</sup> Both CEQA and NEPA are “painstaking process[es]”<sup>196</sup>; CEQA reviews take an average of 2.4 years,<sup>197</sup> and NEPA reviews take an average of 4.6 years.<sup>198</sup>

CEQA and NEPA are substantially similar and primarily serve the same basic function: they both “essentially [ring] ‘an environmental alarm bell,’ designed to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.”<sup>199</sup> However, unlike NEPA, which is an “‘essentially procedural’ overlay designed to inform, not direct, decisionmaking,”<sup>200</sup> CEQA actually directs a lead agency’s substantive decisionmaking.<sup>201</sup> If a project requires input from both federal and state agencies, they may collaborate and/or rely on each other to complete just one environmental impact analysis to satisfy both the requirements of NEPA and CEQA.<sup>202</sup> However, because CEQA alone “dictate[s] that the least environmentally harmful alternative be implemented,”<sup>203</sup> an EIS that would otherwise satisfy the requirements of NEPA may not satisfy those of CEQA.<sup>204</sup>

Thus, for a hypothetical solar-project parcel that encompasses both state and federal land, the project developer might be forced to wait for federal agencies to comply with NEPA and then for state agencies to subsequently comply with CEQA’s additional requirements. The developer would be at the peril of the relevant state and federal agencies’ ability and willingness to collaborate “to the fullest extent possible to reduce duplication between [CEQA] and [NEPA].”<sup>205</sup> Assuming state and federal agencies are able and willing to collaborate efficiently and effectively, the state agency may use the NEPA/CEQA

<sup>195</sup> Troxler, *supra* note 159, at 172; *see also* Outka, *supra* note 144, at 262–64.

<sup>196</sup> Troxler, *supra* note 159, at 176; *see also* Outka, *supra* note 144, at 262–66.

<sup>197</sup> Troxler, *supra* note 159, at 180. Completing an EIR takes an average of 447.6 days. *Id.* at 180–81.

<sup>198</sup> U.S. GOV’T ACCOUNTABILITY OFF., GAO 14-369, NATIONAL ENVIRONMENTAL POLICY ACT: LITTLE INFORMATION EXISTS ON NEPA ANALYSES 13 (2014).

<sup>199</sup> Troxler, *supra* note 159, at 174 (citing *Laurel Heights Improvement Ass’n v. Regents of Cal.*, 764 P.2d 278, 282 (Cal. 1988)).

<sup>200</sup> Outka, *supra* note 144, at 264 (citing *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council*, 435 U.S. 519, 558 (1978)).

<sup>201</sup> *E.g.*, Troxler, *supra* note 159, at 176; *see also* C. Aylin Bilir, *Stopping the Runaway Train of CEQA Litigation: Proposals for Non-Judicial Substantive Review*, 35 ENVIRONS 145, 149–51 (2012).

<sup>202</sup> Bilir, *supra* note 201, at 148. *See generally, e.g.*, CAL. CODE REGS. tit. 14, §§ 15220–15229 (2017).

<sup>203</sup> Sara Wimberger, Note, *Consideration of Alternatives in Environmental Impact Reports: The Importance of CEQA’s Procedural Requirements*, 36 ECOLOGY L.Q. 499, 516–17 (2009).

<sup>204</sup> *See* CAL. CODE REGS. tit. 14, § 15221 (2017).

<sup>205</sup> *See id.* § 15226. *See generally, e.g.*, Peter Maloney, *California Solar Project Shot Down After Clearing Federal Environmental Permits*, UTILITY DIVE (Aug. 26, 2016), <http://www.utilitydive.com/news/california-solar-project-shot-down-after-clearing-federal-environmental-per/425193> [<https://perma.cc/53A4-N8K2>].

compliant EIS/EIR to impede development of the project<sup>206</sup>—all at the expense of the developer’s time and money.<sup>207</sup> Beyond this risk, the developer of such a project would be exposed to the added uncertainty of at least two regulatory processes (state and federal) by which multiple agencies, and lawsuits by the public, can impede the project’s ultimate approval.<sup>208</sup> Moreover, NEPA and CEQA represent just one instance of the regulatory anticommons for project parcels in California.<sup>209</sup>

Development of a solar-project parcel subject to more than one primary jurisdiction is mostly hypothetical at present because such projects, at least those in the DRECP area, are virtually unheard of. Out of fifty-three total renewable projects of varying size and type (including solar, wind, and geothermal) in the DRECP plan area,<sup>210</sup> only one project crossed county lines,<sup>211</sup> and none encompassed both federal and state lands.<sup>212</sup> This lack of multijurisdictional project parcels is the picture of renewable energy development at present: the picture of beams of useable and convertible solar energy striking parcels of solar panels on project sites located within single primary jurisdictions—but, generally speaking, nowhere else.<sup>213</sup>

This result is significant for two reasons. First, the primary-jurisdiction limitation on the number of feasible development sites may eventually lead to suboptimal solar development (i.e., at some point in the future demand for additional solar projects may exceed the supply of project parcels available for development).<sup>214</sup> Second, the primary-jurisdiction limitation results in a suboptimal choice of land for development. In other words, it does not matter if developing a neighboring solar-project parcel would be better for the environment (in terms of endangered species, water etc.), better for the public (in terms of

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<sup>206</sup> See Bilir, *supra* note 201, at 151 (“[T]he political accountability rationale for CEQA’s structure breaks down when projects subject to CEQA apply across regions that may have divergent environmental values.”).

<sup>207</sup> See Troxler, *supra* note 159, at 175–79.

<sup>208</sup> See generally, e.g., Bilir, *supra* note 201; Troxler, *supra* note 159.

<sup>209</sup> See generally, e.g., Bellantuono, *supra* note 37, at 347–49; Kosnik, *supra* note 93, at 380–81. Another example in this context includes the California Endangered Species (CESA), CAL. FISH & GAME CODE §§ 2050–2116 (2013), and the Endangered Species Act of 1973 (ESA), 16 U.S.C. §§ 1531–1544 (2012).

<sup>210</sup> For additional information about this data, see generally *infra* note 250–51.

<sup>211</sup> See DRAFT DRECP, *supra* note 9, app. o at O-4.

<sup>212</sup> See *id.* at O-2 to O-5.

<sup>213</sup> See generally *id.*; *Renewable Energy Projects Under Development, with Existing and Approved Transmission Lines*, CAL. ENERGY COMMISSION (Dec. 24, 2015), [http://www.energy.ca.gov/maps/renewable/renewable\\_development.html](http://www.energy.ca.gov/maps/renewable/renewable_development.html) [<https://perma.cc/Q4K2-REKP>].

<sup>214</sup> This statement reflects a qualitative inference. This author was unable to find any quantitative analysis of the availability of acreage that is both feasible and economical for utility-scale solar development and how the presence of multiple primary jurisdictions affects that baseline availability. The baseline data is readily available. See, e.g., DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 40. But data with which to discern the impact of the jurisdiction variable on that baseline has eluded this author.

conservation of natural and cultural resources etc.), and otherwise better for the developer (in terms of engineering challenges/costs, vicinity of existing transmission infrastructure, etc.): if that neighboring parcel crosses primary jurisdictions—and for no other reason—it will likely be the last to be developed.<sup>215</sup>

The specter of regulatory-anticommons problems in California may be wreaking havoc on solar energy development in a different, subtler (even rather ironic), but no less significant way. The nearly exponential proliferation of overlapping secondary and tertiary<sup>216</sup> jurisdictions as one moves closer to the center of urban areas may be driving solar energy developers as far into rural areas as feasibly possible—areas that are the most likely to be untouched by human development.<sup>217</sup> Moreover, the closer a proposed solar project is to urban areas, the more neighbors it will likely have—neighbors who may not want a solar farm in their backyards.<sup>218</sup>

Herein lies the cruelest tragedy of renewable-energy governance as it stands today: the apparent paradox that solar development may be doing more harm to the environment than good—a paradox apparent enough to give even the most ardent advocates of utility-scale solar development reason for pause.<sup>219</sup> But whether solar development is going on in one's own backyard or half a world away, a general principle will govern that development: Where there are anticommons clouds, there will likely be suboptimal choice of solar-project parcels to develop; and where there is such suboptimal choice, there will likely be suboptimal outcomes. The issue, then, is how to address the anticommons clouds looming over the future of utility-scale solar.

## II. THE SOLUTION

*“The isolation and fragmentation of [renewable] energy planning and development in the United States is a flaw that can no longer be ignored.”*<sup>220</sup>

Several solutions have been proposed to address anticommons concerns in various contexts.<sup>221</sup> As described in Part I, the central characteristics of anticommons property are the presence of multiple owners, each with unilateral rights of exclusion, and the lack of a clear hierarchy of decisionmaking among those multiple owners.<sup>222</sup> Thus, it follows that proposed solutions to anticom-

<sup>215</sup> See *infra* text accompanying note 296–98. But see *infra* note 300.

<sup>216</sup> Recall that California has 58 counties, 482 incorporated cities, and 2,156 independent special districts. INST. FOR LOCAL GOV'T, *supra* note 181, at 3.

<sup>217</sup> See Lee, *supra* note 152.

<sup>218</sup> *Id.*

<sup>219</sup> See, e.g., Imhoff, *supra* note 156, at 83–84; see also Wiseman, *supra* note 20, at 509–10; Warburg, *supra* note 15. See generally Logar, *supra* note 8, at 367–71.

<sup>220</sup> Wiseman, *supra* note 20, at 540.

<sup>221</sup> See HELLER, *supra* note 80, at 187–198 (2008); see also, e.g., Kosnik, *supra* note 93, at 381–87; Wiseman, *supra* note 20, at 528–38.

<sup>222</sup> Dibadj, *supra* note 40, at 1049; Heller, *supra* note 27, at 670–73. See generally *supra* Section I.B.1.

mons-property concerns would tend to aim primarily at establishing a hierarchy of authority and/or reducing the number of owners in the anticommons property.<sup>223</sup>

Proposed solutions to regulatory-anticommons concerns parallel such logic: if there are agencies with overlapping jurisdiction and no clear hierarchy governing their discordant, duplicative, and uncoordinated requirements, then it follows that reforms would be needed to either: 1) establish a lead supervisory agency and hierarchize the disparate regulatory entities; 2) eliminate or at least harmonize duplicative requirements by consolidating and/or standardizing the disparate regulations; and/or 3) coordinate the efforts of agencies with overlapping jurisdiction.<sup>224</sup>

A. *The Options: All Roads Lead to Streamlining*

*“The main lesson from the literature is that some sort of coordinating authority or streamlined institutional structure is required in order to encourage communication and group outcomes. Otherwise, suboptimal regulatory outcomes are inevitable.”*<sup>225</sup>

Wiseman’s approach to reforming fragmented regulatory framework governing renewable-energy involves the creation of “regional energy board[s],”<sup>226</sup> what this Note calls “regional superagencies”<sup>227</sup>: independent agencies with broad authority to consolidate and/or coordinate the discordant and multitudinous regulatory processes of local, state, regional, and federal agencies into a comprehensive and streamlined framework.<sup>228</sup> Her solution would “creat[e] a defined area of governance, establish[] primary governing authority in one institution, and collect[] and streamlin[e] regulations within that institution.”<sup>229</sup> This approach can be roughly broken down into three basic overlapping components: structural reform, organizational reform, and streamlining.<sup>230</sup>

<sup>223</sup> See, e.g., HELLER, *supra* note 80, at 187–198.

<sup>224</sup> See generally Kosnik, *supra* note 93, at 381–84; Wiseman, *supra* note 20, at 528–34.

<sup>225</sup> Kosnik, *supra* note 93, at 381.

<sup>226</sup> See Wiseman, *supra* note 20, at 526–28.

<sup>227</sup> Compare Wiseman, *supra* note 20, at 528–34 (defining her “regional renewable governance” model), with DuVivier, *supra* note 156, at 198 (describing the “superagency solution”).

<sup>228</sup> See Wiseman, *supra* note 20, at 526–28.

<sup>229</sup> *Id.* at 527.

<sup>230</sup> Compare Wiseman, *supra* note 20, at 528–38, and *Hybrid Energy Governance*, *supra* note 146, at 4–10, with Kosnik, *supra* note 93, at 381–87, and Imhoff, *supra* note 156, at 93–97. These overlapping components can also be considered distinct approaches. See Kosnik, *supra* note 93, at 381.

1. *Structural Reform: The Regional Superagency*

*“Forgotten in th[e energy] fray is the fact that renewable energy resources in a majority of states have no comparable statewide agency to facilitate the siting and regulatory processes [governing solar energy development].”*<sup>231</sup>

Wiseman’s ideal solution first involves the creation of regional superagencies to oversee renewable-energy development.<sup>232</sup> This approach is primarily structural.<sup>233</sup> According to Wiseman, to prove operationally effective, a regional superagency must first be an independent agency: one that “[does] not function within an existing federal, state, or municipal entity [or governance framework].”<sup>234</sup> An ideal regional superagency would also require the power to establish a hierarchy of decision-making authority—with itself at the top, under which all relevant local, state, and federal agencies take direction to coordinate their regulatory processes and resolve interagency disputes.<sup>235</sup> In other words, it must not be limited to serving merely an advisory role in its coordination of agencies and stakeholders within the hierarchy.<sup>236</sup>

Additionally, a regional superagency would require the authority to unify and/or standardize the substantive requirements of vertically disparate local, state, and federal regulations into a cohesive top-down framework.<sup>237</sup> An effective regional superagency would also require preemption powers—or an equivalent authority (e.g., something akin to the structure of the Clean Air Act’s cooperative-federalism framework)<sup>238</sup>—over all lower relevant local zoning codes, local ordinances, state laws, and state regulations.<sup>239</sup> Such authority would be required to overrule any single dissenter, such as a local government or municipal entity, with either unfounded or purely NIMBY-based opposition to a solar energy project.<sup>240</sup> For similar reasons, a regional superagency would also require final authority over project siting and approval of the construction of necessary electricity-transmission infrastructure.<sup>241</sup> Beyond these requirements, an effective regional superagency must also adequately integrate private-stakeholder and public interest participation within its decision-making

<sup>231</sup> DuVivier, *supra* note 156, at 191.

<sup>232</sup> Wiseman, *supra* note 20, at 528.

<sup>233</sup> See Kosnik, *supra* note 93, at 382 (“The first possible type of reform would be to create a lead regulatory agency with primacy rights over [renewable-energy] management issues.”). Structural reform has also been called a “one-stop shop” approach. See, e.g., Wiseman, *supra* note 20, at 526.

<sup>234</sup> Wiseman, *supra* note 20, at 528.

<sup>235</sup> *Id.* at 527–28, 530–31.

<sup>236</sup> *Id.* at 516–17.

<sup>237</sup> See *id.* at 528, 532; Wiseman et al., *supra* note 1, at 898–99.

<sup>238</sup> See Ross Cheit, *The Energy Mobilization Board*, 8 *ECOLOGY L.Q.* 727, 742–43 (1980).

<sup>239</sup> See Wiseman, *supra* note 20, at 531–32.

<sup>240</sup> See *id.* at 531.

<sup>241</sup> See *id.* at 514, 528, 530–31.

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framework.<sup>242</sup> The regional-superagency approach has several benefits and several drawbacks,<sup>243</sup> explored below.<sup>244</sup>

### 2. *Organizational Reform: Last Agency Standing*

*“Centralized, state-level siting authority could address all of the[] cost, expertise, efficiency, and environmental concerns [associated with renewable-energy development].”<sup>245</sup>*

Structural reform is distinguishable from organizational reform in that structural reform leaves intact the existing regulatory rights holders and is therefore primarily procedural,<sup>246</sup> whereas organizational reform aims to reduce the number of such rights holders by consolidating their authority in the single superagency.<sup>247</sup> In other words, whereas structural reform creates a hierarchy of decision-making authority, organizational reform would eliminate the need for a hierarchy at all by taking authority from each of the various lower entities and consolidating such authority in the single superagency. True organizational reform is much more radical than structural reform and therefore highly unlikely in the renewable context—especially interstate and/or state-federal organizational reform.<sup>248</sup>

### 3. *Streamlining: Hybrid Regional Governance*

*“It’s a [c]oordination [p]roblem.”<sup>249</sup>*

Although regional superagencies represent the ideal solution, Wiseman also recognizes the importance of “hybrid institutions” as models for future regional superagencies.<sup>250</sup> “Hybrid [r]egional [g]overnance”<sup>251</sup> would involve the

<sup>242</sup> See, e.g., *Hybrid Energy Governance*, *supra* note 146, at 8–9.

<sup>243</sup> See generally, e.g., Kosnik, *supra* note 93, at 382–83; Wiseman, *supra* note 20, at 527–30.

<sup>244</sup> See *infra* Section II.A.2.

<sup>245</sup> DuVivier, *supra* note 156, at 196.

<sup>246</sup> See Kosnik, *supra* note 93, at 383. Wiseman’s approach involves procedurally consolidating the exercise of the exclusion-equivalent rights and interests of regional stakeholders under a central process led by the regional superagency. Wiseman, *supra* note 20, at 530. In other words, structural reform does not consolidate authority; it merely establishes a hierarchy of existing authority under the new lead superagency. See Kosnik, *supra* note 93, at 382; see also Wiseman, *supra* note 20, at 530.

<sup>247</sup> See Kosnik, *supra* note 93, at 383–84.

<sup>248</sup> See *id.* See generally Cheit, *supra* note 238, at 727.

<sup>249</sup> Kosnik, *supra* note 93, at 376.

<sup>250</sup> See, e.g., Hari M. Osofsky & Hannah J. Wiseman, *Dynamic Energy Federalism*, 72 MD. L. REV. 773, 818 (2013) [hereinafter *Dynamic Energy Federalism*]; *Hybrid Energy Governance*, *supra* note 146, at 4–5. However, according to Wiseman, hybrid institutions ultimately “cannot fully solve” the problems of regulatory anticommons associated with renewable-energy development. *Hybrid Energy Governance*, *supra* note 146, at 61; Wiseman et al., *supra* note 1, at 898–99; see also Wiseman, *supra* note 20, at 509–511.

cooperation and collaboration of agencies and actors from multiple levels of government through innovative relationships (what this Note calls “structural hybridity”) and innovative governance processes (what this Note calls “organizational hybridity”).<sup>252</sup> Such innovative governance relationships and processes are “hybrid” by virtue of their capacity to facilitate both vertical<sup>253</sup> and horizontal<sup>254</sup> cooperation and collaboration between state, federal, and private stakeholders involved in a complex regulatory framework.<sup>255</sup>

Whereas the regional-superagency solution reflects, primarily, structural and organizational reforms to consolidate and unify regulatory authority and processes,<sup>256</sup> hybrid institutions “help ameliorate the problem of inadequate [and fragmented] authority without requiring major legal [(i.e., organizational)] or institutional [(i.e., structural)] reform.”<sup>257</sup> In other words, hybrid institutions attempt to resolve regulatory commons and anticommons problems without structurally hierarchizing authority and without organizationally reducing the number of agencies or regulatory processes by consolidating them.<sup>258</sup> Rather, such hybrid institutions represent innovations within the existing regulatory framework—innovations which, in terms of novel relationships (structural hybridity) and/or novel coordination efforts (organizational hybridity), serve to streamline disparate, fragmented, and/or overlapping regulatory processes and substantive requirements. Hybridity and streamlining are closing related concepts.

“Streamlining” carries at least two distinct meanings in the context of renewable-energy development.<sup>259</sup> However, Wiseman explicitly rejects “streamlining” as it is used to describe “fast tracking” and the regulatory approach it embodies.<sup>260</sup> Rather, Wiseman uses the term “streamlining” to refer to “a com-

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<sup>251</sup> *Hybrid Energy Governance*, *supra* note 146, at 5 (emphasis omitted).

<sup>252</sup> *See id.* at 4.

<sup>253</sup> “Vertical,” here, refers to up-and-down interactions between different levels of governance. *Dynamic Energy Federalism*, *supra* note 250, at 815–20.

<sup>254</sup> “Horizontal,” here, refers to side-to-side interactions across the same level of governance. *Id.* at 820–24.

<sup>255</sup> *See id.* at 812–24; *Hybrid Energy Governance*, *supra* note 146, at 5–6, 61–62.

<sup>256</sup> *Compare* Wiseman, *supra* note 20, at 528–38, *with* Kosnik, *supra* note 93, at 381–84.

<sup>257</sup> *Hybrid Energy Governance*, *supra* note 146, at 61–62; *see also* *Dynamic Energy Federalism*, *supra* note 250, at 812–24.

<sup>258</sup> Kosnik, *supra* note 93, at 387.

<sup>259</sup> First, it is often used as a synonym for “expediting” and “fast-tracking,” both of which refer to, in general terms, the priority review of certain projects and an agency’s performance of certain regulatory requirements on a wide (generally called “programmatic”) scale in advance of individual project applications being filed and reviewed—the combined effect of which is to shorten the review and approval process for particular types of projects. *See generally* Logar, *supra* note 8.

<sup>260</sup> *See* Wiseman et al., *supra* note 1, at 898. Wiseman disagrees with expedited review to the extent that regulatory process becomes hasty and places value merely on speed at the expense of essential regulatory requirements, however cumbersome, that serve important societal goals, values, and concerns. *See id.* at 898–99; *see also* Wiseman, *supra* note 20, at 509–10. Wiseman’s definition of streamlining is not always the same as the DRECP’s. As used

prehensive state-wide or regional regime that collects all localized zoning rights and state permitting and review requirements within one process.”<sup>261</sup>

One may reconcile the unobvious difference between Wiseman’s definition of streamlining and the definitions of structural and organizational reform by first thinking of streamlining as the (highly likely) result of ideal structural and organizational reform.<sup>262</sup> However, streamlining is distinguishable from both structural and organizational reform because streamlining can be accomplished *without* structural or organizational reform. The dispositive feature of streamlining is not consolidation, but rather harmonization: streamlining harmonizes and standardizes disparate regulations through collaboration without necessarily consolidating or hierarchizing them.<sup>263</sup>

More specifically, an ideal governance framework based on institutional hybridity would facilitate four objectives. First, the network of agencies with overlapping jurisdiction should involve some form of structural hybridity in forming an interagency panel to serve as an informal central hub for developers attempting to navigate the complex regulatory processes and various substance requirements of each member jurisdiction.<sup>264</sup> This central hub should serve as the face of the network of agencies and thereby provide developers with a “one-stop shop” point of communication and source of comprehensive application information pertaining to all the requirements of the relevant agencies and entities.<sup>265</sup> Second, this informal central hub should serve as the principal point of vertical and horizontal interagency coordination and communication.<sup>266</sup> The informal hub should initiate and coordinate the requisite reviews of the disparate agencies involved in the project, and it should do so as early in the project-planning process as possible.<sup>267</sup> Third, the central hub should integrate processes for collaborating with and obtaining feedback from private stakeholders and public-interest groups within the coordinated network of regulatory decisionmaking.<sup>268</sup> Lastly, as discussed below, hybridity-based efforts to streamline

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by the BLM and in DRECP documents, “streamlining” sometimes is used to refer to fast-track/expedited approval for proposed renewable-energy development in pre-screened zones (called “Development Focus Areas”) of BLM-administered lands. *See, e.g.*, DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 24; DRECP LUPA, *supra* note 11, at 11. *See generally* discussion in *infra* Section II.B.3. Thus, for clarity, this Note refers to the DRECP’s use of the word streamlining in this context exclusively as “fast tracking” or “expediting.”

<sup>261</sup> Wiseman et al., *supra* note 1, at 898.

<sup>262</sup> *See generally*, *supra* Sections II.A.1–2.

<sup>263</sup> *See* Kosnik, *supra* note 93, at 381, 384.

<sup>264</sup> Imhoff, *supra* note 156, at 93–94; *see* Wiseman et al., *supra* note 1, at 898–99.

<sup>265</sup> *See* Wiseman, *supra* note 20, at 525–26, 530–31; Imhoff, *supra* note 156, at 93–94; *see also* Kosnik, *supra* note 93, at 384–87; Wiseman et al., *supra* note 1, at 898–99.

<sup>266</sup> *See, e.g.*, Imhoff, *supra* note 156, at 93–94.

<sup>267</sup> *Id.* at 94–95.

<sup>268</sup> *See Hybrid Energy Governance*, *supra* note 146, at 8–9; Imhoff, *supra* note 156, at 95–96.

regional regulatory processes can and should include a dispute resolution procedure for managing both vertical and horizontal interagency disagreements.<sup>269</sup>

#### 4. *Defining Effective Renewable Governance*

“[O]ne must of course have a definition of success.”<sup>270</sup>

In theory, such a comprehensive framework of institutional hybridity for regulating solar energy development should increase agency efficiency, reduce regulatory delays, and prevent agencies and private parties with exclusion-equivalent rights in the approval process from unilaterally holding up renewable-project development without good cause.<sup>271</sup> It would accomplish these objectives by informally organizing, standardizing, and coordinating (i.e., “streamlining”) the many regulatory processes and requirements imposed by agencies and entities across all levels of government involved in regulating most solar energy projects. The hybrid-institution approach, though perhaps ultimately less ideal, at least avoids many of the political, legal, and bureaucratic challenges in creating regional superagencies, which would require true institutional and perhaps even organization reform to satisfy Wiseman’s governance criteria.<sup>272</sup>

Evaluating the success of any governance framework involves three principal qualitative inquiries: 1) whether the reform has the potential to reduce inefficiency, delay, and uncertainty in the regulatory process for solar energy developers;<sup>273</sup> 2) whether the reform fills regulatory gaps and addresses regulatory overlaps without creating new regulatory gaps and overlaps;<sup>274</sup> and 3) whether the framework is innovative in terms of hybridity and regionalism.<sup>275</sup> The success of a specific instance of institutional hybridity should be based on a handful of considerations: whether it effectively harmonizes regulatory processes across levels of governance; whether it facilitates interagency collaboration, cooperation, and communication in addressing the problems of regulatory fragmentation and overlapping jurisdiction; and whether it provides for the in-

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<sup>269</sup> See *Hybrid Energy Governance*, *supra* note 146, at 24–31; Imhoff, *supra* note 156, at 93–94; see also Heller, *supra* note 27, at 670 (“An object is held as anticommons property if [each of its multiple owners holds a core right in the property], with no hierarchy among these owners’ rights or clear rules for conflict resolution.”).

<sup>270</sup> *Hybrid Energy Governance*, *supra* note 146, at 56.

<sup>271</sup> Imhoff, *supra* note 156, at 93; see also Wiseman, *supra* note 20, at 527–528. See generally *supra* Section I.D.

<sup>272</sup> See generally Kosnik, *supra* note 93, at 381–82.

<sup>273</sup> *Id.* at 381; Imhoff, *supra* note 156, at 85–87; see Wiseman, *supra* note 20, at 509–511.

<sup>274</sup> See Wiseman, *supra* note 20, at 509–511; Wiseman et al., *supra* note 1, at 898–99.

<sup>275</sup> See *Hybrid Energy Governance*, *supra* note 146, at 56 (“[T]here is arguably value in having a better energy governance process even if the outcomes remain the same.”). See generally discussion *supra* Section II.A.

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volvement of private and public stakeholders in the regulatory and governance process.<sup>276</sup>

*B. The DRECP: 10,000 Pages; 12,000 Comments; A Few Basic Questions*<sup>277</sup>

*1. What is it?*

*“[T]he most ambitious and innovative planning effort undertaken in the California desert[:] it strikes the right balance between the protection of critical desert resources and the responsible development of much-needed renewable energy—not an easy feat by any measure.”*<sup>278</sup>

In general terms, the DRECP (“Plan”) is an interagency, intergovernmental collaboration designed to facilitate utility-scale renewable development in an expansive region of desert in southern California while protecting the region’s desert ecosystems and conserving the region’s recreational, cultural, and natural resources.<sup>279</sup> Home to “an abundance of some of the best solar, wind, and geothermal resources in the nation,” the Plan area spans seven local counties and covers approximately 22,585,000 acres of both federal, state, and private lands across California’s Mojave and Colorado/Sonoran Deserts.<sup>280</sup> The region is home to rich biological diversity,<sup>281</sup> a “robust cultural heritage,” and a variety of economic and social interests.<sup>282</sup> As such, the multijurisdictional Plan area presents significant economic opportunities and considerable regulatory hurdles for prospective renewable energy developers. The DRECP is a comprehensive regulatory framework tailored to the unique multiplicity of opportunities, challenges, jurisdictions, and interests the Plan area represents. It aims to achieve, as a quantitative benchmark, a combined capacity of twenty thousand megawatts<sup>283</sup> from renewable energy facilities in the Plan area.<sup>284</sup> To achieve that

<sup>276</sup> See *Hybrid Energy Governance*, *supra* note 146, at 9–12; see also Kosnik, *supra* note 93, at 382, 384; Imhoff, *supra* note 156, at 94–95.

<sup>277</sup> See Sammy Roth, *County Governments Criticize Renewable Energy Plan*, DESERT SUN (Feb. 26, 2015, 5:49 PM), <http://www.desertsun.com/story/tech/science/energy/2015/02/26/county-governments-criticize-renewable-energy-plan/24092121> [<https://perma.cc/XQQ9-VRN7>].

<sup>278</sup> O’Shea & Cavanagh, *supra* note 13.

<sup>279</sup> DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 6.

<sup>280</sup> *Id.* at 6, 7; see also Cal. Energy Comm’n, *supra* note 12.

<sup>281</sup> For a description of California’s desert ecosystems, see generally ELNA S. BAKKER, AN ISLAND CALLED CALIFORNIA 285–344 (2d ed. 1984).

<sup>282</sup> DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 6.

<sup>283</sup> For comparison, the Ivanpah facility has a capacity of roughly 400 megawatts (MW). See *Ivanpah Project Facts*, *supra* note 29. Thus, the DRECP’s benchmark roughly equates to a net capacity of 50 Ivanpah facilities. The state of Nevada requires roughly 10,000 MW (total) of capacity in the summer. *Nevada Electricity Profile 2015*, U.S. ENERGY INFO. ADMIN. (Jan. 17, 2017), <https://www.eia.gov/electricity/state/Nevada> [<https://perma.cc/X8TG-C84X>]. Thus, if fully developed, the DRECP region could power roughly two Nevadas. By contrast, California requires roughly 75,000 MW (total). *California Electricity Profile 2015*,

goal, the DRECP includes several policy objectives, only one of which this Note considers: to coordinate county, state, and federal permitting procedures for renewable-energy projects.<sup>285</sup>

## 2. *How does it work?*

In more specific terms, the DRECP is a document (“Draft DRECP”), the import of which is perhaps best understood by way of analogy: The Draft DRECP is a sort of Uniform Commercial Code (UCC) for renewable energy development (and conservation) in the Plan area.<sup>286</sup> First, it has no legal effect in a particular jurisdiction until the jurisdiction formally adopts it as law. Se-

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U.S. ENERGY INFO. ADMIN. (Jan. 17, 2017), <http://www.eia.gov/electricity/state/California> [<https://perma.cc/T8GH-4SAB>].

<sup>284</sup> DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 14, 16.

<sup>285</sup> *See id.* at 7.

<sup>286</sup> As discussed below, the Draft DRECP contains multiple disparate components to address the many goals embodied in the document. However, the general theme in each of these components is an interjurisdictional approach/solution. For instance, the Draft DRECP includes a draft EIR/EIS that would satisfy the requirements of both NEPA and CESA. *See* 3 DRAFT DRECP, *supra* note 147, at III.1-5 to 1-6 (“The ‘affected environment’ (NEPA) and ‘environmental setting’ (CEQA) together make up the environmental baseline used to determine the effects of the Plan. The environmental baseline is the same for both NEPA and CEQA.”); 4 *id.* at IV.1-2 (“This document describes, in general, potential environmental, economic, and social effects of the Plan. The discussion of cumulative and growth-inducing impacts is also general and corresponds to the level of analysis of a Programmatic EIR/EIS. Proposed mitigation strategies that can be applied in future tiered projects address significant adverse environmental consequences. However, the precise impacts of individual projects cannot readily be identified at this early planning stage; supplemental CEQA and NEPA documents will be prepared to address project-specific analyses when additional information on specific proposed projects is available. This document has been prepared to comply with both CEQA and NEPA. Both laws require the analysis of environmental impacts of the Plan. This analysis can be approached the same way for both laws, but each law requires that certain issues be specifically addressed. Both CEQA and NEPA are designed to identify significant environmental impacts; however, they have slightly different definitions and approaches to determining significance.”). In a different sense, the DRECP is something like the U.C.C. (AM. LAW. INST. & NAT’L CONFERENCE OF COMM’RS ON UNIF. STATE LAWS 2005), in that the Draft DRECP is intended to serve as a model for the standardization (albeit for primarily conservation purposes) of law/codes at the local/county level of governance. *See* DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 9 (“After the DRECP is finalized, a local government could elect to prepare its own NCCP and/or apply directly for incidental take under the GCP. The local government would have flexibility to prepare a plan that covers not just renewable energy projects, but also other private development and public infrastructure projects. The local government would also have flexibility to define appropriate development areas for renewable energy projects and appropriate conservation areas for species covered by the DRECP, provided the local government’s plan is consistent with the DRECP’s Biological Goals and Objectives and mitigation requirements (i.e., that it tiers from the DRECP). Instead of or in addition to participating directly in the implementation of the DRECP, local governments could choose to use the DRECP for other purposes, such as developing land use plans or policies, developing local requirements for renewable energy projects, identifying conservation priorities, identifying sensitive habitat areas, or identifying appropriate mitigation areas for the impacts of locally approved projects.”).

cond, its purpose (uniformity of law across jurisdictions) is thwarted to the extent that it is not formally adopted by all relevant jurisdictions. In other words, the Draft DRECP is a document that, as a master key and “one size fits all” solution, will standardize (to an extent) many of the disparate laws and regulatory requirements of jurisdictions with either overlapping or fragmented authority over renewable development in the Plan area. However, the Draft DRECP is little more than a document to the extent that the relevant jurisdictions fail to formally adopt it.

As such, the DRECP can roughly be broken down, first, into two implementation phases: Phase I, which pertains exclusively to the BLM and the federal lands across the Plan area over which the BLM has primary jurisdiction; and Phase 2, which pertains much more broadly to the counties and agencies (both state and federal)<sup>287</sup> with varying levels of jurisdiction over federal, state, and/or private lands in the Plan Area.<sup>288</sup> Second, it can roughly be broken down into three planning/spatial components: first, the BLM’s DRECP LUPA, which applies to over ten million acres of BLM-administered lands;<sup>289</sup> second, the USFW’s “General Conservation Plan” (GCP),<sup>290</sup> which would apply to nearly five and a half million acres of state and private lands; and, third, the CDFW’s Natural Community Conservation Plan (“NCCP”),<sup>291</sup> which would apply to the entire Plan area.<sup>292</sup> A technical discussion of the latter two components is beyond the scope of this Note.

The BLM completed Phase I in September 2016 by promulgating the DRECP LUPA, which amended various already-existing land-use designations and land-use plans for BLM-administered lands within the Plan area.<sup>293</sup> The LUPA is, generally speaking, neither an inter-jurisdictional nor an interagency effort: it is managed solely by the BLM and applies exclusively to renewable development on certain federal lands within the DRECP area.<sup>294</sup> The LUPA

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<sup>287</sup> See generally discussion *infra* Section II.B.3.a.

<sup>288</sup> E.g., U.S. BUREAU OF LAND MGMT., DESERT RENEWABLE ENERGY CONSERVATION PLAN: RECORD OF DECISION FOR THE LAND USE PLAN AMENDMENT TO THE CALIFORNIA DESERT CONSERVATION PLAN, BISHOP RESOURCE MANAGEMENT PLAN, AND BAKERSFIELD RESOURCE MANAGEMENT PLAN (Sept. 2016), [http://drecp.org/finaldrecp/rod/DRECP\\_BLM\\_LUPA\\_ROD.pdf](http://drecp.org/finaldrecp/rod/DRECP_BLM_LUPA_ROD.pdf) [<https://perma.cc/6CC2-GSMG>] [hereinafter LUPA ROD].

<sup>289</sup> DRECP LUPA, *supra* note 11, at 12.

<sup>290</sup> See generally Memorandum from Dir. of U.S. Dep’t of the Interior Fish and Wildlife Serv. to the Assistant Reg’l Dirs., Regions 1, 2, 3, 4, 5, 6, & 7, & Manager, Cal./Nev. Operations Office (Oct. 5, 2007), <https://www.fws.gov/policy/m0369.pdf> [<https://perma.cc/UA6H-HNVN>]; see also, generally, Cal. Energy Comm’n, *General Conservation Plan*, DRECP, [www.drecp.org/factsheets/archive/General\\_Conservation\\_Plan.pdf](http://www.drecp.org/factsheets/archive/General_Conservation_Plan.pdf) [<https://perma.cc/4BUY-9SCU>] (last visited Oct. 26, 2017).

<sup>291</sup> See generally CAL. FISH & GAME CODE § 2069 (West 2013).

<sup>292</sup> E.g., DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 9.

<sup>293</sup> See LUPA ROD, *supra* note 288, at 1; see also DRECP LUPA, *supra* note 11, at xi, xvii–iii.

<sup>294</sup> See, e.g., DRECP LUPA, *supra* note 11, at 1. The BLM LUPA also applies to some non-DRECP federal land on the periphery of the DRECP Plan area. See, e.g., *id.* at 1, 5 fig.2.

was based upon already-existing regional management policies in the BLM's Western Solar Plan,<sup>295</sup> which covers solar energy development on federal lands across Arizona, California, Colorado, Nevada, New Mexico, and Utah.<sup>296</sup> The LUPA adopted the general land-management strategy of the broader Western Solar Plan but narrowly tailored it to be more specific to the DRECP region.<sup>297</sup>

The BLM's LUPA establishes five major categories of federal lands in the DRECP plan area: "Development Focus Areas (DFAs), Variance Process Lands (VPLs), General Public Lands, BLM Conservation Areas, and BLM Recreation Areas."<sup>298</sup> This Subsection will briefly address only LUPA DFAs,<sup>299</sup> primarily because "the BLM [has] adopt[ed] a variety of incentives to steer future renewable energy development to the DFAs,"<sup>300</sup> which the BLM has identified as the best areas for renewable development with the least potential for negative environmental impacts.<sup>301</sup>

LUPA DFAs collectively cover about 388,000 acres of federal lands in the Plan area<sup>302</sup>—lands which the BLM has prescreened as the best sites for renewable development in terms of various factors, including availability of renewable resources, suitability for large-scale infrastructure, and potential that such infrastructure will disturb wildlife.<sup>303</sup> DFAs are similar to, and based upon, the

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<sup>295</sup> DRECP LUPA, *supra* note 11, at 65. *See generally* U.S. BUREAU LAND MGMT.: SOLAR ENERGY PROGRAM, <http://blmsolar.anl.gov/> [<https://perma.cc/6K62-JS3C>] (last visited Oct. 26, 2017); *see also, generally*, U.S. Bureau of Land Management & U.S. Dep't of Energy, *EIS-0403: Final Programmatic Environmental Impact Statement*, ENERGY.GOV: OFF. NEPA POL'Y & COMPLIANCE, <https://energy.gov/nepa/downloads/eis-0403-final-programmatic-environmental-impact-statement> [<https://perma.cc/P7TE-WPZM>] (last visited Oct. 26, 2017) [hereinafter Solar PEIS]; *Final Solar Energy Development Programmatic Environmental Impact Statement (Solar PEIS)*, SOLAR ENERGY DEV. PROGRAMMATIC EIS INFO. CTR., <http://solareis.anl.gov/documents/fpeis/index.cfm> [<https://perma.cc/YBD7-Z6ER>] (last visited Oct. 26, 2017).

<sup>296</sup> *E.g.*, U.S. BUREAU OF LAND MANAGEMENT, APPROVED RESOURCE MANAGEMENT PLAN AMENDMENTS/RECORD OF DECISION (ROD) FOR SOLAR ENERGY DEVELOPMENT IN SIX SOUTHWESTERN STATES 17 (Oct. 2012), [http://solareis.anl.gov/documents/docs/Solar\\_PEIS\\_ROD.pdf](http://solareis.anl.gov/documents/docs/Solar_PEIS_ROD.pdf) [<https://perma.cc/XZ9G-QZEG>].

<sup>297</sup> *See* DRECP LUPA, *supra* note 11, at 11, 65. The LUPA, however, applies to all renewables, including wind and geothermal. *See id.* at 11–12.

<sup>298</sup> *Id.* at 11.

<sup>299</sup> For the sake of clarity and simplicity, this Note limits its discussion of DRECP DFAs to LUPA DFAs. LUPA DFAs are a specific subset of the more general category of DRECP DFAs, which includes DFAs on state and private lands. *See* DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 40 tbl.7.

<sup>300</sup> DRECP LUPA, *supra* note 11, at 60. *See generally id.* at 61–64 tbl.13 (listing incentives for development within DFAs).

<sup>301</sup> *See, e.g.*, LUPA ROD, *supra* note 288, at 25–26.

<sup>302</sup> *E.g.*, DRECP LUPA, *supra* note 11, at 56 tbl.11 (providing distribution of DFA acreage by county and technology).

<sup>303</sup> *See* DRECP LUPA, *supra* note 11, at xiii, 11; LUPA ROD, *supra* note 288, at 25–28; *see also* NEW ENERGY FRONTIER, *supra* note 4, at 15. *But see, e.g.*, Roth, *supra* note 161 (citing Sammy Roth, *Wind Energy Faces Turbulent Future in Desert*, DESERT SUN (Nov. 24, 2014), <http://www.desertsun.com/story/money/2014/11/24/drecp-hurt-windmill->

Western Solar Plan's "Solar Energy Zones" (SEZs).<sup>304</sup> The BLM offers numerous significant incentives to develop these areas—including facilitated permitting for transmission infrastructure,<sup>305</sup> various economic incentives,<sup>306</sup> and, most significantly, an expedited permitting/review process<sup>307</sup> and NEPA tiering.<sup>308</sup>

### 3. *What does it change? (Hybrid Governance in the DRECP)*

#### a. *Structural Hybridity in REAT*

The principal state and federal agencies implementing the Plan are the California Energy Commission (CEC), the California Department of Fish and Wildlife (CDFW), the BLM, and the U.S. Fish and Wildlife Service (USFWS).<sup>309</sup> These principal agencies, along with various other state and federal agencies, comprise an innovative hybrid-governance framework called the Renewable Energy Action Team (REAT).<sup>310</sup> REAT is not a new, independent agency; rather, it is a network of disparate, already-existing agencies—each of which maintains its independent and substantive pre-REAT regulatory role, authority, and jurisdiction over the fragmented Plan area.<sup>311</sup> Through this network, REAT agencies coordinate their respective efforts in implementing the DRECP by, for instance, maintaining regular interagency communications and integrated databases of DRECP-pertinent information, resolving interagency disagreements through a unique dispute resolution procedure, and reviewing

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developments/70059056 [https://perma.cc/84DF-EU9L] (explaining that critics of the DRECP says the Plan precludes development on the best lands for wind-energy development).

<sup>304</sup> See DRECP LUPA, *supra* note 11, at 60. See generally Logar, *supra* note 8, at 376–382 (discussing SEZs and DFAs).

<sup>305</sup> DRECP LUPA, *supra* note 11, at 62 tbl.13.

<sup>306</sup> See *id.* at 62–63 tbl.13.

<sup>307</sup> See *id.* at 59, 61 tbl.13; see also DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 24 exhibit 4 (providing a visual summary of the expedited review process for projects within DFAs); Logar, *supra* note 8, at 380 n.102 (quoting 2 DRAFT DRECP, *supra* note 147, at II.2-17 (Aug. 2014) (Description and Comparative Analysis of Draft DRECP Alternatives) [hereinafter DRAFT DRECP VOL. II]).

<sup>308</sup> DRECP LUPA, *supra* note 11, at 59. See generally discussion *infra* Section II.B.3.b.ii.

<sup>309</sup> DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 6.

<sup>310</sup> Cal. Energy Comm'n, *Reat*, DRECP, <http://drecp.org/participants> [https://perma.cc/VW H2-WYHJ] (last visited Oct. 27, 2017).

<sup>311</sup> See generally Planning Agreement by and Among California Department of Fish and Game, California Energy Commission, United States Bureau of Land Management, and United States Fish and Wildlife Service for the Desert Renewable Energy Conservation Plan (May 2010), <http://www.energy.ca.gov/2009publications/REAT-1000-2009-034/REAT-1000-2009-034-F.PDF> [https://perma.cc/B8UP-WAP7] [hereinafter REAT Planning Agreement].

project proposals, sharing pertinent DRECP-project documents, and coordinating project timelines.<sup>312</sup>

*i. Hybrid Hierarchy: A Pyramid of Coordination*

Although the DRECP does not create a new lead agency with broad consolidated authority, it does incorporate structural hybridity into its innovative regulatory approach. The proposed DRECP Implementation Agreement by REAT agencies would create several hybrid institutions, including the DRECP Executive Policy Group (Policy Group), the DRECP Coordination Group (Coordination Group), and several “Working Groups.”<sup>313</sup>

The Policy Group would be responsible for coordinating interagency matters related to the DRECP’s big picture.<sup>314</sup> It would be composed of several state and federal agency representatives, including a senior representative designated by the Governor of California, a senior representative designated by the Secretary of the Interior, the California Director of the BLM, the Regional Director of the USFWS, a CEC Commissioner, the Director of the CDFW, and the Executive Officer of the California State Lands Commission.<sup>315</sup> The Policy Group would set big-picture interagency policy objectives, coordinate REAT agencies vertically and horizontally, and serve as the highest level of arbitral authority in the DRECP’s interagency dispute resolution framework.<sup>316</sup>

The Coordination Group would be responsible for managing interagency matters related to the DRECP’s day-to-day implementation.<sup>317</sup> It would be composed of several state and federal agency representatives, initially including representatives of the principal REAT agencies.<sup>318</sup> The Coordination Group would also include additional representatives from local governments to the extent that such governments cooperate with the DRECP by, *inter alia*, adopting mitigation and conservation plans that “tier” from the DRECP.<sup>319</sup> The Coordination Group would oversee the implementation of the Policy Group’s big-

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<sup>312</sup> Draft Memorandum of Understanding by and Between the Bureau of Land Management, the U.S. Fish and Wildlife Service, the California Energy Commission, and the California Department of Fish and Wildlife Regarding Collaboration and Partnership in Implementing the Desert Renewable Energy Conservation Plan 2–4, [http://drecp.org/draftdrecp/documents/Draft\\_DRECP\\_Implementation\\_MOU.pdf](http://drecp.org/draftdrecp/documents/Draft_DRECP_Implementation_MOU.pdf) [<https://perma.cc/YT96-SPVJ>] [hereinafter Draft Implementation MOU]; *see also* Implementing Agreement for the Desert Renewable Energy Conservation Plan 8-10 (Dec. 23, 2014), [http://drecp.org/draftdrecp/documents/Draft\\_DRECP\\_NCCP\\_Implementation\\_Agreement.pdf](http://drecp.org/draftdrecp/documents/Draft_DRECP_NCCP_Implementation_Agreement.pdf) [<https://perma.cc/M24B-7WAD>] [hereinafter Draft Implementation Agreement]; *infra* Section II.B.3.a.ii.

<sup>313</sup> Draft Implementation Agreement, *supra* note 312, at 8–9; *see also* DRAFT DRECP VOL. II, *supra* note 307, at II.3-103, [http://drecp.org/draftdrecp/files/c\\_Volume\\_II/II.3\\_PREFERRED\\_Alternative.pdf](http://drecp.org/draftdrecp/files/c_Volume_II/II.3_PREFERRED_Alternative.pdf) [<https://perma.cc/GL67-WZQU>].

<sup>314</sup> *See generally* DRAFT DRECP VOL. II, *supra* note 307, at II.3-211–13.

<sup>315</sup> *Id.* at II.3-212.

<sup>316</sup> *See id.*

<sup>317</sup> *See generally id.* at II.3-213.

<sup>318</sup> *Id.* at II.3-213.

<sup>319</sup> *Id.*

picture objectives and coordinate REAT-agency actions and matters.<sup>320</sup> The Implementation Agreement would also create a Program Manager, who would answer to the Coordination Group and manage Coordination Group staff in an advisory role.<sup>321</sup>

The Implementation Agreement would also incorporate input from various public, private, and government interests into the decision-making process through several Working Groups, including the Public Agency Working Group, the Stakeholder Working Group, and the Stakeholder Science Subgroup.<sup>322</sup> The Public Agency Working Group would incorporate government-interest input from representatives of numerous extra-REAT state and federal agencies, including the U.S. Environmental Protection Service, the National Park Service, the California Public Utilities Commission, the California Department of Conservation, and local governments.<sup>323</sup> The Stakeholder Working Group would incorporate public- and private-interest input from representatives of, *inter alia*, the general public living in the Plan area, renewable energy industries, and environmental organizations.<sup>324</sup> The Stakeholder Working Group would also include the Stakeholder Science Subgroup, a panel of scientists and technical experts who would provide expertise to be incorporated into the Coordination Group's recommendations.<sup>325</sup>

*ii. Hybrid Dispute Resolution: Interagency Arbitration*

The Draft Implementation Agreement would also create a unique dispute resolution mechanism to streamline the permitting process by preventing unilateral administrative holdups.<sup>326</sup> This dispute resolution mechanism would implicate both vertical and horizontal hybridity by including multiple levels of authority in resolving interagency issues. The level at which the issue is reviewed depends on the agencies involved and the level at which the dispute arises. Each level of review offers a range of state and federal agency representatives who, either individually or in any combination as appropriate, review the dispute at that level.<sup>327</sup>

At the lowest level, issues are resolved by any appropriate combination of the following: the BLM Field Office Manager, the USFWS Assistant Field Supervisor, the CEC Project Manager, and/or the CDFW Environmental Program

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<sup>320</sup> *Id.* at II.3-213–14.

<sup>321</sup> DRAFT IMPLEMENTATION AGREEMENT, *supra* note 312, at 9; *see also* DRAFT DRECP VOL. II, *supra* note 307, at II.3-215.

<sup>322</sup> DRAFT IMPLEMENTATION AGREEMENT, *supra* note 312, at 9; *see also* DRAFT DRECP VOL. II, *supra* note 307, at II.3-218–19.

<sup>323</sup> DRAFT DRECP VOL. II, *supra* note 307, at II.3-218.

<sup>324</sup> *Id.* at II.3-219.

<sup>325</sup> *Id.*

<sup>326</sup> *See* Draft Implementation MOU, *supra* note 312, at 3.

<sup>327</sup> *See id.* at 4.

Manager.<sup>328</sup> If the dispute cannot be resolved at that level, then it goes to the second level by any appropriate combination of the following: the BLM District Manager; the USFWS Field Supervisor; the CEC Deputy Director for the Division of Siting, Transmission, and Environmental Protection; and/or the CDFW Regional Manager.<sup>329</sup> The final level involves the members of the DRECP Executive Policy Group: the BLM State Director, the USFWS Regional Director, the CEC Executive Direct, and the CDFW Director.<sup>330</sup> The DRECP Coordination Group could intervene to resolve an issue at any level.<sup>331</sup>

*iii. A Hybrid One-Stop Shop*

Although California's CEC provides developers with a one-stop shop for complying with all permitting requirements for solar thermal power plants, there is no such one-stop shop for utility-scale facilities relying on wind turbines or PV solar panels.<sup>332</sup> The DRECP does little to change this, but the draft DRECP Implementation Agreement would create the Coordination Group and delegate to it a responsibility akin to the CEC's one-stop shop responsibilities in regulating thermal power plants: to streamline permitting for projects in the DRECP plan area, the Coordination Group would accept project proposals for development on any site in the DRECP area and informally review them before the formal application and permitting process begins.<sup>333</sup>

*iv. Evaluating REAT's Structural Hybridity*

This structural framework exhibits unique horizontal and vertical hybridity in its attempt to prevent some of the anticommons concerns associated with renewable development. By administratively internalizing the coordination of agency efforts and the resolution of interagency disputes, this approach would, in theory, accomplish the same objective as would Wiseman's superagency approach: eliminating unilateral holdouts by agencies with exclusion-equivalent rights and interests in the project-parcel development process, while (more or less) combining disparate regulatory processes into something more coherent and unified.<sup>334</sup>

The project proposal feature of the Draft Implementation Agreement would offer multiple benefits. First, developers would feel less overwhelmed by the various and multitudinous regulatory processes by having a single entity with which to communicate.<sup>335</sup> Second, it would provide the developer with feedback on what additional steps it would need to take and what additional infor-

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<sup>328</sup> *Id.*

<sup>329</sup> *Id.*

<sup>330</sup> *Id.*

<sup>331</sup> *Id.*

<sup>332</sup> See discussion *supra* Section I.D.3.

<sup>333</sup> See Draft Implementation Agreement, *supra* note 312, at 13.

<sup>334</sup> See, e.g., Wiseman, *supra* note 20, at 530–34.

<sup>335</sup> Imhoff, *supra* note 156, at 94.

mation it would need to gather throughout the various permitting processes.<sup>336</sup> Third, a project proposal would alert the Coordination Group of new projects to help it coordinate, in advance, the agencies the project would involve.<sup>337</sup> Fourth, as an incentive for developers to utilize this option, submitting a project proposal would trigger streamlining benefits once the application is submitted to the relevant regulatory agencies—including priority status for environmental reviews under CEQA and/or NEPA to be completed by relevant agencies within a guaranteed timeframe of one year.<sup>338</sup> This incentive benefits agencies (in terms of administrative efficiency) and developers (in terms of less uncertainty) by triggering coordinated environmental review as early as possible in the application process.<sup>339</sup>

The project proposal and dispute resolution process of the Draft DRECP Implementation Agreement are worthy of emulation by future regional renewable energy superagencies and hybrid institutions. Although both mechanisms rely on cooperation and not substantive reallocation and consolidation of authority, even a regional superagency could use such informal methods to establish a regulatory process more inclusive of public, private, local, and interagency interests. The informal project proposal mechanism could be extended to include an informal comment period. Once a project proposal is reviewed, but before the formal application process begins, the project proposal could be made public, and the superagency could allow for a similar informal comment period. Such informal comments would facilitate the superagency's understanding of local and regional concerns and viewpoints much earlier on in the process, and it would help the superagency direct relevant agencies and the developer to address concerns much earlier in the formal regulatory process.<sup>340</sup>

Additionally, a dispute resolution procedure could extend beyond interagency disputes to provide a forum for citizens to voice noteworthy local and regional concerns directly to developers.<sup>341</sup> At a minimum, this procedure would benefit all parties by increasing the amount and quality of information and perspective available. Such a resolution process might also be useful for facilitating constructive negotiations between developers and private-land owners after private negotiations reach an impasse.<sup>342</sup> Especially in the case of regional superagencies—which inherently run the risk of favoring developers and regional concerns at the expense of local voices and concerns<sup>343</sup>—informal dispute resolution forums would lead to more informed decisions by agencies, better siting and permitting outcomes for developers, less resentment by locals im-

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<sup>336</sup> *See id.*

<sup>337</sup> *See id.*

<sup>338</sup> Draft Implementation Agreement, *supra* note 318, at 13.

<sup>339</sup> *See Imhoff, supra* note 156, at 94–95.

<sup>340</sup> *See generally Imhoff, supra* note 156, at 94–96.

<sup>341</sup> *See Imhoff, supra* note 156, at 95–96.

<sup>342</sup> *See generally Logar, supra* note 8.

<sup>343</sup> *See Bellantuono, supra* note 37, at 331.

pected by development, and fewer lawsuits over disagreements between all involved parties.<sup>344</sup>

*b. Organizational Hybridity in the DRECP*

Some minimal level of standardization is required both to lessen uncertainty for developers who may be considering several siting options in different counties and to facilitate development of project parcels that cross county borders.<sup>345</sup> Although it does not involve consolidating substantive regulatory requirements under a single superagency's administration, the DRECP nonetheless incorporates innovative organizational hybridity into its ambitious approach. Through the exhaustive efforts of REAT agencies in conjunction with creative legislative action by California lawmakers, the DRECP includes mechanisms and incentives for standardizing disparate regulatory requirements across levels of governance both vertically and horizontally.<sup>346</sup>

*i. Hybrid Preemption*

The DRECP does not reflect any willingness by California to extend the CEC's preemptive powers over all renewable energy development on state lands in the Plan area.<sup>347</sup> However, California has opted to provide grants as incentives for counties in the Plan area to adopt and/or revise zoning ordinances and land-use/conservation plans consistent with the DRECP and its objectives.<sup>348</sup> This incentive program provides a general pool of seven million dollars for allocation to "qualified counties" to facilitate "the development or revision of rules and policies . . . that facilitate the development of eligible renewable energy resources. . . ."<sup>349</sup> In exchange for the grant money, a county must complete the development or revision within two years.<sup>350</sup> The incentive carries an additional requirement for DRECP counties: the county must agree to adopt the DRECP NCCP (once finalized by the CDFW) or agree to develop its own NCCP that is consistent with the DRECP's goals.<sup>351</sup> This limited alternative to preemption power under Wiseman's superagency approach has the potential to accomplish the same objective: standardizing local requirements for more of a one-size-fits-all compliance process.<sup>352</sup>

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<sup>344</sup> See generally Imhoff *supra* note 156; Logar, *supra* note 8.

<sup>345</sup> See Wiseman et al., *supra* note 1, at 871–77.

<sup>346</sup> See LUPA ROD, *supra* note 288, at 4.

<sup>347</sup> The CEC does have exclusive jurisdiction over and preemption powers over solar-thermal power plants, like Ivanpah, in the DRECP plan area. *E.g.*, DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 9.

<sup>348</sup> See CAL. PUB. RES. CODE § 25619 (West 2016).

<sup>349</sup> *Id.*

<sup>350</sup> *Id.*

<sup>351</sup> See *id.*; see also DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 9.

<sup>352</sup> See Wiseman et al., *supra* note 1, at 871–77.

*ii. Hybrid Consolidation: Tiering*

The primary benefit to developing within a LUPA DFA is the time saved due to the BLM's in-advance programmatic environment review (DRECP EIS) of LUPA lands in the DRECP area.<sup>353</sup> NEPA requires the BLM to review both the possible region-wide impacts of a development and potential site-specific impacts on the local environment before approving a project for development.<sup>354</sup> Because the BLM has already completed, in advance, a region-wide review for the Plan area in its DRECP EIS, developers need only complete the site-specific environmental review required by NEPA.<sup>355</sup> This approach is called "tiering."<sup>356</sup> Under the DRECP LUPA, only projects on LUPA DFAs are eligible for both tiering and expedited review.<sup>357</sup>

Permitting for projects on LUPA DFAs will be significantly expedited due to the BLM's DRECP EIS, but this fact alone does little to address the NEPA/CEQA regulatory anticommens. In the LUPA context, NEPA does not present a true regulatory anticommens because LUPA DFAs do not implicate overlapping jurisdictions; however, LUPA's allowance for tiering under NEPA solves redundancies in the administrative process from the perspective of the BLM. Because NEPA is so time consuming for federal agencies, and mostly a procedural safeguard, the DRECP LUPA helps mitigate internal administrative inefficiency with arguably little risk.

*iii. Evaluating Organizational Hybridity in the DRECP*

California and the BLM's efforts are models for future attempts to streamline regulatory processes for renewable development. At least in theory, California's incentive program is a model not only for intrastate standardization across local counties, but also for how standardizing the laws and regulations across multiple states might be accomplished. The federal government could provide incentives for states to form regional superagencies by signing com-

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<sup>353</sup> Logar, *supra* note 8, at 380; *see also* DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 24–25 Ex. 4 (providing a summary of the site-specific requirements for projects within DFAs). The BLM's DRECP-LUPA programmatic review incorporates the BLM's 2012 Solar PEIS. Solar PEIS, *supra* note 295. *See* DRECP LUPA, *supra* note 11, at app. w ("Solar Programmatic EIS Design Features"). Additionally, the LUPA itself includes a DRECP-area specific programmatic review. *See generally* 2–3 LUPA, *supra* note 11.

<sup>354</sup> *See* Outka, *supra* note 144, at 262–63. *See generally* discussion *supra* Section I.D.3.

<sup>355</sup> Logar, *supra* note 8, at 379–80; *see also* DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 24–26, 46–54.

<sup>356</sup> DRECP LUPA, *supra* note 11, at 59.

<sup>357</sup> *See, e.g., id.* Tiering and other incentives for development on DFAs outside the DRECP LUPA are available to the extent a county's land-use codes and regulations on renewable-energy development have identified lands as non-LUPA DFAs, *see* DRECP LUPA, *supra* note 11, and allow for such incentives. *See* DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 24; *see also* O'Shea & Cavanagh, *supra* note 13.

pacts,<sup>358</sup> or for states within a region to standardize their laws and statewide siting/permitting processes.

Lead state and federal agencies must be vigilant over project-specific EIS/EIRs that tier to the DRECP EIS to ensure that possible impacts do not slip by.<sup>359</sup> Tiering to the DRECP EIS and/or Draft DRECP EIR under NEPA/CEQA has the potential to create a gap akin to those found in regulatory commons. This gap could arise as a difference in benchmarks for defining region-wide and project-specific impacts. In other words, an impact might escape scrutiny under CEQA/NEPA if it meets neither the criteria for classification as a regionwide impact nor the criteria for classification as a site-specific impact. Such an impact could slip through the cracks and not be included in either the DRECP EIS or the site-specific EIR/EIS. Impacts that escape scrutiny will invite interest groups to challenge the project under CEQA/NEPA and prolong the permitting process for the project while costly litigation ensues.<sup>360</sup> Thus, if the BLM is not vigilant for such gaps, tiering might prolong the very process it was designed to streamline.<sup>361</sup> Acknowledging local concerns in the permitting process could help prevent such litigation.<sup>362</sup>

#### 4. *Will it work?*

*“Of course, there is no guarantee that a voluntary process involving a large number of stakeholders will succeed. . . .”*<sup>363</sup>

Ultimately, as it stands today, the DRECP is only a partial solution to anti-commons-based concerns associated with renewable energy development. Although it has met some success, its ultimate impact on solar development and conservation in the Plan area remains to be seen. Although it is a creative and comprehensive attempt to promote its objectives within the confines and limitations of hybrid governance, it is ultimately subject to those confines and limitations.

First, the DRECP does not create an independent agency with any significant top-down authority over local governments. REAT agencies do not have preemption authority over county-level ordinances or state laws pertaining to siting and permitting of PV solar projects.<sup>364</sup> The DRECP sets out various ob-

<sup>358</sup> See Outka, *supra* note 144, at 276–78; Wiseman, *supra* note 20, at 529. For a brief discussion of interstate compacts in the context of renewable energy development, see *infra* note 382.

<sup>359</sup> See generally Logar, *supra* note 8, at 375–80.

<sup>360</sup> Logar, *supra* note 8, at 380.

<sup>361</sup> See *id.* at 381–82.

<sup>362</sup> *Id.* at 384–85 (citing Imhoff, *supra* note 156, at 93).

<sup>363</sup> Bellantuono, *supra* note 37, at 347.

<sup>364</sup> See, e.g., 1 DRAFT DRECP, *supra* note 147, at I.2-26 to 28, [http://drepc.org/draftdrepc/files/b\\_Volume\\_I/I.2\\_Legal\\_Framework.pdf](http://drepc.org/draftdrepc/files/b_Volume_I/I.2_Legal_Framework.pdf) [<https://perma.cc/2WW6-KQG8>] [hereinafter DRAFT DRECP VOL. I]. The DRECP does not extend the CEC’s jurisdiction to cover wind and photovoltaic technologies. *Id.*

jectives for the Plan area, and REAT agencies have *agreed* to coordinate their efforts to achieve the DRECP's objectives.<sup>365</sup> Such voluntary coordination is not without significance; however, to the extent their authority is limited, REAT agencies are relying on incentives to effectuate cross-county conformity with the objectives of the DRECP—incentives that may not be strong enough to overcome NIMBY political pressure on county officials.<sup>366</sup>

Nonetheless, the incentive program has proved largely a success: Out of the fifteen counties eligible for the seven-million-dollar pool of grants, six counties have accepted more than three million dollars.<sup>367</sup> Five of those six counties are in the DRECP area,<sup>368</sup> meaning that the incentive program has succeeded in getting five out of seven DRECP counties to commit to plans that are beneficial for renewable energy development. Additionally, three DRECP counties have voluntarily collaborated with the CEC in identifying and setting aside non-federal lands specifically for renewable development.<sup>369</sup> However, the counties are far from agreement on many issues—including, for instance, whether the DRECP's strong focus on conservation may in fact stifle, and not promote, renewable energy development,<sup>370</sup> and whether private lands should be developed before public lands.<sup>371</sup> To what extent counties and local governments will voluntarily cooperate with the CEC on such issues remains to be seen.

Second, the DRECP does little to alter the substantive regulatory framework for renewable development in the Plan area.<sup>372</sup> REAT agencies do not

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<sup>365</sup> See generally, e.g., REAT PLANNING AGREEMENT, *supra* note 311.

<sup>366</sup> Roth, *supra* note 277.

<sup>367</sup> Assistance to Counties on the State Renewable Energy and Conservation Planning Grants (RECPG) Program, ASPEN ENVTL. GROUP <http://www.aspeneg.com/projects/assistance-to-counties-on-the-state-recpg-program> [<https://perma.cc/J7GY-DBTE>] (last visited Oct. 27, 2017).

<sup>368</sup> *Id.* The five DRECP counties that accepted grants are Inyo, San Bernadino, Imperial, Riverside, and Los Angeles. *Id.* Kern and San Diego counties have not accepted grants. See *id.* Kern County likely did not need the money, considering how favorable that county is for renewable development. See *Kern County, DRECP* (Mar. 2017), <http://drecp.org/counties/kern.html> [<https://perma.cc/PQQ4-UCTG>].

<sup>369</sup> NRDC ET AL., THE DESERT RENEWABLE ENERGY CONSERVATION PLAN STRIKES THE RIGHT BALANCE 4 (2016), [https://www.defenders.org/publications/ngo\\_drecp\\_memo\\_7\\_29\\_16.pdf](https://www.defenders.org/publications/ngo_drecp_memo_7_29_16.pdf) [<https://perma.cc/GK56-BX9L>]; see also O'Shea & Cavanagh, *supra* note 13. However, development on private lands remains a contentious issue between the CEC and several DRECP counties. See Roth, *supra* note 277.

<sup>370</sup> See, e.g., David Danelski, *Environment: Riverside County Objects to Desert Conservation Plan*, THE PRESS-ENTERPRISE (Jul. 12, 2016, 6:08 PM), <http://www.pe.com/2016/07/12/environment-riverside-county-objects-to-desert-conservation-plan> [<https://perma.cc/3LSV-Z3FC>]; Morgan Lee, *Solar Energy Blotting Out Nature, Farms in California*, SAN DIEGO UNION-TRIB. (Oct. 19, 2015, 6:58 PM), <http://www.sandiegouniontribune.com/sdut-big-solar-big-impacts-2015oct19-story.html> [<https://perma.cc/KMW8-2UH9>].

<sup>371</sup> See O'Shea & Cavanagh, *supra* note 13; Roth, *supra* note 277; see also Hernandez et al., *supra* note 144, at 13582.

<sup>372</sup> See, e.g., DRAFT DRECP: EXECUTIVE SUMMARY, *supra* note 9, at 23.

have the authority to consolidate or alter the various regulatory processes under state and federal laws. REAT agencies therefore cannot directly address the primary regulatory-anticommons concern with renewable development (i.e., overlapping regulatory requirements). Development on a project parcel that crosses state and federal land will require, at least for now, independent and perhaps duplicative compliance with site-specific analysis under both NEPA and CEQA, ESA and CESA, etc.<sup>373</sup> Thus, such development remains unfeasible.

Although the BLM's DRECP LUPA EIS provides federal agencies a considerable amount of programmatic, regional impact-assessment information to which their future project-specific EISs may tier, the DRECP EIS is fatally limited for two reasons. First, the DRECP EIS is a programmatic review of only BLM-administered lands and is therefore quite limited for purposes of cross tiering with EIRs. PV Solar projects on exclusively federal land in California do in fact require EIRs<sup>374</sup>—and such EIRs may tier to the DRECP EIS. However, the second reason why the DRECP EIS is fatally limited involves its finite usefulness in the circumstance described above: the county in charge of the EIR that tiers to the DRECP EIS may deny the solar project regardless of the EIS's content.<sup>375</sup> Moreover, such a decision cannot be preempted by any state (or federal) agency,<sup>376</sup> and the substantive decision is effectively unreviewable in court.<sup>377</sup>

Perhaps the reality of this limitation is one reason why so few applications have been submitted for solar-project development on LUPA lands.<sup>378</sup> California lawmakers should recognize this limitation and extend to the CEC some minimum level of preemption power over county-levels decisions pertaining to utility-scale PV solar and wind projects.<sup>379</sup> Alternatively, the problem could be addressed through a new administrative process for non-judicial review/scrutiny of county-level CEQA decisions pertaining to utility-scale PV solar and wind projects.<sup>380</sup>

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<sup>373</sup> *E.g., id.* at 46; *see also* discussion in *supra* Part I.

<sup>374</sup> *See* Troxler, *supra* note 159, at 172.

<sup>375</sup> *See, e.g.,* Maloney, *supra* note 205.

<sup>376</sup> *See* Bilir, *supra* note 201, at 149–51. Solar thermal power plants (e.g., Ivanpah) and other thermal power plants on federal lands are the only exceptions here because the CEC has exclusive jurisdiction over such projects and, should it delegate the lead agency role to a local government, it would retain preemption powers over the local government's decision. *See* CAL. PUB. RES. CODE § 25500 (West 2016); DuVivier, *supra* note 156, at 198–200; *see also* CAL. PUB. RES. CODE § 25120 (defining thermal powerplant).

<sup>377</sup> Bilir, *supra* note 201, at 151–52.

<sup>378</sup> *See generally* Wiseman, *supra* note 20.

<sup>379</sup> DuVivier, *supra* note 156, at 198–200.

<sup>380</sup> Bilir, *supra* note 201, at 150–51.

C. *The Challenge of Renewable Energy Governance*

“While a new balance may be justified in the competing goals of energy development and environmental protection, perhaps the change should be wrought directly, through changes in the laws and regulations that are blamed for delay, rather than by creating ‘superagencies,’ like the proposed EMB [Energy Mobilization Board], that will override existing laws and add yet another tier to an already complex system of governmental regulation.”<sup>381</sup>

The DRECP/REAT approach is not an instance of Wiseman’s proposed regional superagencies. First, the DRECP is not “regional” as Wiseman contemplates because California is the only state involved in the effort. Although the DRECP represents an innovation in vertical and horizontal coordination between county governments and federal and intrastate agencies, the DRECP lacks horizontal coordination between multiple states—a requisite for Wiseman’s ideal regional approach. California is the largest state in the U.S., and in this sense the DRECP might be considered regional; however, the step from intrastate coordination to interstate coordination will prove far more difficult.<sup>382</sup> Moreover, a regional superagency may not even be desirable.

Wiseman describes the CEC’s intrastate coordination/preemption of county regulations/governments for thermal power plant siting as a model for future regional governance of renewable parcels;<sup>383</sup> however, the CEC’s exclusive jurisdiction and preemption powers currently apply only to large-scale thermal power plants and solar thermal power plants, and not to wind or photovoltaic technologies.<sup>384</sup> There is a nonobvious reason for this apparent oddity: it is perceived that small-scale energy facilities and all wind/photovoltaic facilities are perceived, whether rightly or wrongly, have larger and more particularized im-

<sup>381</sup> Cheit, *supra* note 238, at 747. A Carter-era proposal, the “Energy Mobilization Board,” offers an example of the legal issues an interstate superagency might encounter. Carter proposed the EMB “[t]o foster appropriate coordination and integration of local, State and Federal actions necessary for the approval of [domestic] energy facilities.” *Id.* at 727 (first alteration in original) (quoting U.S. White House, Domestic Policy Staff, Memorandum on Specifications of an Operation of an Energy Mobilization Board 1 (July 1979)).

<sup>382</sup> See generally, e.g., Cheit, *supra* note 238, at 728; Outka, *supra* note 144, at 289–92, 295–96. Wiseman’s regional superagencies would be formed through state compacts, which require congressional ratification and would then become federal law. See Wiseman, *supra* note 20, at 539. Thus, a regional superagency raises a number of interesting federalism-based issues. See generally Outka, *supra* note 144, at 285–96. The EMB described in Cheit, *supra* note 238, at 727–28, would provide an interesting comparison with Wiseman’s regional superagency and the CEC as described in DuVivier, *supra* note 156, at 189–90, 198–202. However, such discussion is beyond the scope of this Note.

<sup>383</sup> See Wiseman, *supra* note 20, at 514, 524–26.

<sup>384</sup> See generally discussion in Part I, *supra*. There is a limited exception where the CEC can retain jurisdiction over solar thermal facilities that convert to photovoltaic technology. CAL. PUB. RES. CODE §§ 25120, 25500.1(a).

pacts at the local level, and therefore that siting and permitting of such facilities should be left to local/county governments.<sup>385</sup>

Wiseman's regional superagency approach would require a delicate balance of possibly incompatible objectives. First, Wiseman suggests that her approach should not reduce the number of rights, interests, or voices of concern pertaining to a renewable project, but rather that they should be procedurally consolidated under a regional superagency. However, a regional superagency with jurisdiction over many projects in multiple states would likely have just as many disputes to resolve.<sup>386</sup> Thus, this solution has the potential to exacerbate the problem.<sup>387</sup> Perhaps a more formal version of the DRECP/REAT's dynamic dispute resolution procedure could mitigate this concern, but even such an approach involves a potentially lengthy and cumbersome process.

The alternative to regional structural reform would be regional organizational reform, which is an unlikely prospect. First, a regional superagency under such an approach would require something akin to takings power over rights involved in a renewable project, a sort of renewable energy eminent domain, which would likely be. Second, this approach would require significant substantive changes to the laws that create such rights (e.g., CEQA and NEPA), another politically unlikely feat. Perhaps incentives like those used in California for the DRECP can help, but, as discussed above, they would likely be ineffective for more contentious issues.

The CEC's preemption powers and one-stop-shop approach to energy governance perhaps represent an ideal solution. However, applying the superagency model to a multistate region would require careful planning and lawmaking to avoid the potential pitfalls of such a solution. Moreover,

extending the CEC's approach to include *interstate* preemption powers will prove a political and legal challenge—perhaps even an impossibility.

#### CONCLUSION

*“Part and parcel of protecting our environment is the energy industry's desire to see us open up more areas of it to future development.”*<sup>388</sup>

Of principal importance in concluding this discussion is reiterating that even the most complex and difficult anticommons issues facing renewable development today *are not arguments against regulation*.<sup>389</sup> The footprint of re-

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<sup>385</sup> See generally Duvivier, *supra* note 156.

<sup>386</sup> One of the concerns with the “Energy Mobilization Board” was that it would be overwhelmed by the number of projects over which it would have jurisdiction. See Cheit, *supra* note 238, at 745.

<sup>387</sup> See Bellantuono, *supra* note 37, at 349.

<sup>388</sup> Matthew DiLallo, *Will the Government Work with Energy Companies?*, MOTLEY FOOL (Mar. 9, 2013, 4:00 PM), <https://www.fool.com/investing/general/2013/03/09/will-the-government-work-with-energy-companies.aspx> [<https://perma.cc/5HY6-KBP7>].

<sup>389</sup> See Bellantuono, *supra* note 37, at 330; Wiseman, *supra* note 20, at 509–11.

newable-energy development is immense—in terms of land, water, and a host of other equally important variables.<sup>390</sup> Regulation is the only bulwark against a host of potential tragedies at stake in large-scale disruptions of habitat. Looming over every decision to develop is the unknown, and the difference between too much regulation and too little regulation might be the difference between an endangered species thriving or going extinct.<sup>391</sup> Decisions to develop any large-scale infrastructure, including renewables, should not be made lightly.<sup>392</sup> Thus, the problem of the anticommons is a challenge to regulate more effectively and more efficiently—but certainly not to regulate less. Regulation is as necessary in the renewable context as in any other context, but alternatives to fossil fuels are just as necessary.

Developing more utility-scale solar energy projects is an essential component of any meaningful solution to address the global threat of climate change.<sup>393</sup> Nonetheless, such development implicates a wide range of societal, environmental, and cultural values.<sup>394</sup> Balancing those values against the threat of climate change may not weigh in favor of developing a utility-scale solar facility in every instance and at every available opportunity.<sup>395</sup> Such questions are complex and beyond the scope of this Note. Suffice it to say that success in facilitating utility-scale solar development should not be measured merely in terms of quantitative benchmarks (e.g., by the number of utility-scale solar facilities springing up in the deserts of California, or by the number of Megawatts in a state's renewable energy portfolio).<sup>396</sup>

Utility-scale solar also implicates broader questions of economics and politics—issues which the law is not always well equipped to address. For instance, the Ivanpah facility, though it had its setbacks,<sup>397</sup> survived the regulatory process and now produces enough carbon-dioxide-free clean energy to fuel the needs of over 140,000 homes.<sup>398</sup> However, serious questions remain: whether the \$2.2 billion project will survive due to economic concerns;<sup>399</sup> whether its 400 MW capacity was worth the ecological trade-offs, sacrifices, and compromises required for its construction;<sup>400</sup> and, more broadly, whether utility-scale

<sup>390</sup> See Wiseman, *supra* note 20, at 509. See generally Outka, *supra* note 144.

<sup>391</sup> See Outka, *supra* note 144, at 250 n.42. “For one species to mourn the death of another is a new thing under the sun.” ALDO LEOPOLD, *A SAND COUNTY ALMANAC AND SKETCHES HERE AND THERE* 110 (1949).

<sup>392</sup> Wiseman, *supra* note 20, at 509. See generally Outka, *supra* note 144.

<sup>393</sup> See Hernandez et al., *supra* note 144, at 773.

<sup>394</sup> See Wiseman, *supra* note 20, at 528; Lee, *supra* note 152; Roth, *supra* note 161.

<sup>395</sup> See generally Outka, *supra* note 144; see also, generally, Wiseman, *supra* note 20.

<sup>396</sup> See *Hybrid Energy Governance*, *supra* note 146, at 56.

<sup>397</sup> See generally Logar, *supra* note 8, at 367–69.

<sup>398</sup> *Ivanpah Project Facts*, *supra* note 29.

<sup>399</sup> See generally Sweet, *supra* note 36.

<sup>400</sup> See Outka, *supra* note 144, at 250; Logar, *supra* note 8, at 367–69. But see Warburg, *supra* note 15 (explaining the benefits of utility-scale solar, especially on land like abandoned

solar development is a good idea at all—especially considering the as-yet un-harnessed potential of distributed solar generation.<sup>401</sup>

Utility-scale renewable developers also face public and private opposition on the New Energy Frontier. Even environmentalists are split on the question of utility-scale solar.<sup>402</sup> On the one hand, photovoltaic solar panels could power all of America's electricity needs if just 0.6 percent of America's land surface were set aside and dedicated to large-scale solar production.<sup>403</sup> On the other hand, dedicating just 10 percent of rooftop space in Southern California to distributed-scale solar panels could provide as much as 80 percent of the region's electricity needs—without threatening wildlife or habitats.<sup>404</sup> However, these two options are not mutually exclusive. With careful, informed planning, regu-

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farms etc.). See generally Hernandez et al., *supra* note 144; see also, generally, Lee, *supra* note 152.

<sup>401</sup> See Lee, *supra* note 152 (noting that “most solar can be located over landfills, parking lots and rooftops”); see also, e.g., Robert L. Glicksman, *Solar Energy Development on the Federal Public Lands: Environmental Trade-Offs on the Road to a Lower-Carbon Future*, 3 SAN DIEGO J. CLIMATE & ENERGY L. 107, 150 n.225 (2011–2012) (“Given the problems faced by [solar-concentrator facilities] in terms of water use, transmission lines, and land footprint, it seems painfully obvious to many people, like those at [the Center for Biological Diversity], that the nation's best solution for renewable solar is a massive system of photovoltaic cells located on rooftops in urban areas.” (second alteration in original) (quoting Glennon & Reeves, *supra* note 16, at 123)).

<sup>402</sup> See Logar, *supra* note 8, at 367–69. See generally, e.g., Chris Mooney, *Why Big Solar and Environmentalists Are Clashing over the California Desert*, WASH. POST (Aug. 15, 2016), [https://www.washingtonpost.com/news/energy-environment/wp/2016/08/15/the-greens-and-solar-industry-agree-on-climate-but-they-cant-agree-on-the-california-desert/?utm\\_term=.f5db6fb6abbd](https://www.washingtonpost.com/news/energy-environment/wp/2016/08/15/the-greens-and-solar-industry-agree-on-climate-but-they-cant-agree-on-the-california-desert/?utm_term=.f5db6fb6abbd) [<https://perma.cc/7HTL-HRTV>]; Sammy Roth, *Why Utilities and Environmentalists Are Teaming Up Against the Solar Industry*, DESERT SUN (July 29, 2016, 5:22 PM), <http://www.desertsun.com/story/tech/science/energy/2016/07/29/why-utilities-and-environmentalists-teaming-up-against-solar-industry/87677852> [<https://perma.cc/7QEJ-L438>].

<sup>403</sup> Warburg, *supra* note 15 (citing Paul Denholm & Robert Margolis, *Land-Use Requirements and the Per-Capita Solar Footprint for Photovoltaic Generation in the United States*, 36 ENERGY POLICY 3531, 3539, 3541 (2008)). But see Gabriel Reilich & Jordan Crucchiola, *The Amount of Land Required to Run America on Solar Power Is Shockingly Small*, GOOD (Apr. 22, 2016), <https://www.good.is/infographics/solar-power-all-of-america> [<https://perma.cc/397L-9GPJ>] (explaining that the land requirements of supporting infrastructure would greatly increase the total amount of land required to run America on exclusively solar energy, and that uses of storage and energy requirements in times of emergency might make America's complete reliance on solar technologies impractical and even undesirable). By comparison, 0.6 percent of America's land surface equates to just two percent of land currently dedicated to crop production. Warburg, *supra* note 15.

<sup>404</sup> MICHAEL F. ALLEN & ALAN MCHUGHEN, SOLAR POWER IN THE DESERT: ARE THE CURRENT LARGE-SCALE SOLAR DEVELOPMENTS REALLY IMPROVING CALIFORNIA'S ENVIRONMENT? 9 (2011) (citing Emily C. Warmann & G. Darrel Jenerette, *Two Paths Towards Solar Energy: Photovoltaic vs. Solar Thermal*, 91 BULL. ECOLOGICAL SOC'Y AM. 173 (Apr. 2010)).

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lation, and decisionmaking, utility-scale renewables can be implemented without major disruptions in the region's complex ecosystems.<sup>405</sup>

As complex as it is controversial, the DRECP represents a monumental undertaking by multiple agencies across all levels of government, and it reflects numerous innovative legal solutions to the many shortcomings of renewable energy governance as it stands today. This Note has highlighted just a few of the DRECP's unique approaches to interagency coordination and innovative hybrid institutions for addressing some of the anticommons problems facing utility scale solar development in California. While this Note leaves many rocks unturned, it has made an effort to draw a roadmap for more specific future inquiries. Although the DRECP does little to directly reform renewable energy governance, its ultimate value rests in the example it sets, new ideas it provides, and future innovations it will inspire. The DRECP itself is an innovation—yet another model for future efforts, yet another example of patterns worth repeating and patterns worth discarding, and yet another iteration of “something new under the sun.”

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<sup>405</sup> See generally DRECP INDEP. SCI. PANEL, FINAL REPORT: INDEPENDENT SCIENCE REVIEW FOR THE CALIFORNIA DESERT RENEWABLE ENERGY CONSERVATION PLAN (DRECP) (2012), <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=58775> [https://perma.cc/89QW-HYU4]. But see generally Barbara Boyle & Sarah Friedman, Senior Campaign Representatives, Sierra Club Beyond Coal Campaign, & Joan Taylor, Chair, Sierra Club Desert Energy Committee, Comment Letter on Draft Desert Renewable Energy Conservation Plan (Feb. 23, 2015).

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