



Photo by Harold Ipolyi

Kelley Dagley and his wife Lori build the largest net-metered residential solar system in Idaho. At 25kW, it supplies all the power for the couple's 100% electric house on top of the mountain at Wilderness Ranch, near Idaho City.

## Solar Incentives and Development: Potential Impact of Federal Legislation

*Alison M. Nelson*



Solar energy is used to provide electricity to homes and businesses in remote locations, but has not been widely adopted as a viable source of affordable electricity across Idaho.

**D**espite its high potential for solar energy, Idaho has relatively few solar energy projects compared to other states. Idaho's negligible policies incentivizing solar energy development may be why. However, the Environmental Protection Agency (EPA) has proposed rules that could force Idaho to adopt a plan to reduce carbon dioxide emissions. Whether Idaho's plan will reduce emissions by requiring increased generation from renewable energy sources, including solar facilities, remains to be seen. This article explores Idaho's few incentives for solar energy development, outlines common incentives used in other states, and concludes by summarizing the EPA's proposed rules and discussing how that may impact Idaho's solar incentives going forward.

### **Idaho's potential for solar energy use**

According to the U.S. Department of Energy, southern Idaho has a solar potential of more than 450 watt hours/ft<sup>2</sup>/day.<sup>1</sup> This is higher than every state in the eastern United States, including Florida. However, The Solar Foundation ranks Idaho only 41<sup>st</sup> in terms of the number of homes that are powered by solar energy.<sup>2</sup> Solar energy is used to provide electricity to homes and businesses in remote locations, but has not been widely adopted as a viable source of affordable electricity across Idaho.

### **Existing state incentives**

The meager number of solar energy projects in Idaho is likely explained by the absence of robust incentives and policies encouraging solar development.

Existing incentives include tax deductions and credits at the state and federal levels. Under Idaho Code section 63-3022C(1), an individual taxpayer who installs an “alternative energy device,” including “any system or mechanism or series of mechanisms using solar radiation,” may deduct 40% of the cost of constructing or installing the device in the first year it is placed in service, and 20% per year in the following three years, up to \$5,000 per taxable year.<sup>3</sup> At most, this amounts to approximately \$1,500 in returns over a four year period.<sup>4</sup> Also, under the federal tax code, a tax credit is available through 2016 for 30% of the qualified solar electric property expenditures for residential projects made in a taxable year,<sup>5</sup> and for 30% of the basis of each “energy property” including equipment using solar energy to generate electricity placed in service during a taxable year.<sup>6</sup>

In addition, loans carrying an interest rate of 4% with a 5-year repayment term are available through Idaho’s State Energy Loan Program, which offers residential loans of up to \$15,000 and commercial loans of up to \$100,000 for solar energy projects.<sup>7</sup>

### **Other types of policies and incentives**

However, Idaho has not adopted other types of policies and incentives seen in other states that further encourage development of solar energy resources.

### **Renewable portfolio standard**

One example is a renewable portfolio standard, which specifies the percentage of energy generated in the state that must be from renewable sources. Twenty-nine states have such a standard in place.<sup>8</sup> For instance, Nevada requires each provider to generate, acquire, or save electricity from portfolio energy sys-

Without a renewable portfolio standard in place, Idaho utilities have no reason to offer customers financial incentives for installing solar energy systems, such as rebates for purchases of solar energy systems or performance-based incentive rates.

tems (including renewable energy systems like solar energy projects) or energy efficiency measures, increasing by 2025 to not less than 25% of the total amount of electricity sold each calendar year.<sup>9</sup> Nine other states do not have enforceable standards but do have renewable portfolio goals in place.<sup>10</sup> For example, Utah law provides that at least 20% of annual retail electric sales shall consist of “qualifying electricity” such as solar, “to the extent that it is cost effective to do so.”<sup>11</sup> Notably, in the western United States, only Idaho and Wyoming lack such standards or goals.<sup>12</sup>

Many renewable portfolio standards further encourage solar development by requiring that a certain percentage of energy come from solar energy rather than other renewable sources. Nevada law requires that by 2016, 6% of the total amount of electricity generated by portfolio energy systems must be generated or acquired from solar renewable energy systems.<sup>13</sup>

Renewable portfolio standards generally provide for a penalty to be assessed against any utility that fails to meet its standards; in Nevada, the Public Utilities Commission may impose a fine “in an amount necessary and reasonable to ensure that the provider complies with its portfolio standard, as determined by the Commission.”<sup>14</sup> Without a renewable portfolio standard in place,

Idaho utilities have no reason to offer customers financial incentives for installing solar energy systems, such as rebates for purchases of solar energy systems or performance-based incentive rates.

### **Interconnection and net metering policies**

In addition, Idaho also lacks other statewide policies that encourage access to solar power, including interconnection policies and net metering policies. While Idaho utilities have each adopted interconnection standards and provide for net metering, the requirements and eligibility for each vary from utility to utility.<sup>15</sup> Moreover, those standards are not codified as state law. Only five other states (North Dakota, Oklahoma, Tennessee, Alabama, and Mississippi) lack a statewide interconnection policy,<sup>16</sup> and only six other states (South Dakota, Tennessee, Alabama, Mississippi, Texas, and South Carolina) lack a statewide net metering policy.<sup>17</sup>

### **Tax incentives**

Finally, Idaho lacks certain tax incentives seen in many other states. Property owners pay tax on any increase in value that results from the installation of a solar energy project, while a tax exemption or tax abatement is available in more than 30 states.<sup>18</sup> Idaho offers a property tax

exemption for wind and geothermal energy producers,<sup>19</sup> but that exemption is not available to solar producers. In addition, purchasers of solar equipment pay sales tax on that equipment, while such equipment is exempt from tax liability in more than 20 states.<sup>20</sup> Idaho used to offer a sales tax refund on the cost of certain machinery, equipment, and support facilities used to generate electricity from solar resources, but that tax refund expired without renewal on July 1, 2011.<sup>21</sup>

### Potential for federal regulations to encourage solar development

Proposed federal regulations could, if adopted as proposed, change this framework significantly. In June 2014, EPA proposed a rule titled “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” in which EPA proposes to establish state-specific goals for carbon dioxide emissions from existing fossil fuel-fired electric generating units (EGUs) and to require states to develop plans to meet those goals.

EPA listed EGUs as a category of stationary source that “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”<sup>22</sup> As a result, EPA must publish standards of performance for new sources within the category and adopt regulations that establish a procedure for states to submit plans that establish standards of performance for existing sources in that category.<sup>23</sup>

For existing EGUs, EPA has proposed that states reduce carbon dioxide emissions through a combination of the following four “building blocks”:

1. Reducing the carbon intensity of generation at individual affected EGUs through heat rate improvements.

2. Reducing emissions from the most carbon-intensive affected EGUs in the amount that results from substituting generation at those EGUs with generation from less carbon-intensive affected EGUs.

3. Reducing emissions from affected EGUs in the amount that results from substituting generation at those EGUs with expanded low- or zero-carbon generation.

4. Reducing emissions from affected EGUs in the amount that results from the use of demand-side energy efficiency that reduces the amount of generation required.<sup>24</sup>

For purposes of the proposed rules, an “affected EGU” is an EGU that meets certain conditions specified in the proposed rules, including base load rating.<sup>25</sup> While the first of these building blocks involves technological changes to the operating source, the remaining blocks would require a state to reduce its use of fossil-fuel fired EGUs, either by substituting generation from other types of sources or by reducing demand for generation overall.

EPA’s proposed regulations also suggest state-specific goals that reflect EPA’s calculation of the emissions reductions each state can achieve.<sup>26</sup> States would be required to meet interim goals between 2020 and 2029 and meet final goals beginning in 2030.<sup>27</sup> Those goals vary widely from state to state. For exam-

ple, Idaho has the lowest proposed interim rate-based carbon dioxide emission performance goal of 244 pounds of carbon dioxide per MWh of net energy output and the next-to-lowest proposed final goal of 228 pounds. In contrast, Utah would be required to meet an interim goal of 1,378 pounds and a final goal of 1,322 pounds.<sup>28</sup>

Additionally, the rules would require states to develop plans to meet the proposed goals pursuant to certain guidelines.<sup>29</sup> Each state plan would be required to identify the EGUs affected by the rule.<sup>30</sup> The state plan would also need to describe the plan approach and identify which of the four building blocks will be used to achieve the required emission reduction, *i.e.*, either forcing technological changes to operating sources (under the first building block), reducing utilization of fossil-fuel fired electric generating units by either substituting generation from other types of sources (under the second and third building blocks) or by reducing demand for generation overall (under the fourth), or some combination of these approaches.<sup>31</sup>

To accomplish this, Idaho might consider increasing utilization of renewable energy sources, including solar facilities, by implementing a renewable portfolio standard. However, efforts to adopt a renewable portfolio standard in Idaho in 2008 were unsuccessful. And other

EPA’s proposed regulations also suggest state-specific goals that reflect EPA’s calculation of the emissions reductions each state can achieve.<sup>26</sup>

options are available to achieve the required emissions reductions. Idaho could choose not to incorporate the third building block of EPA's proposed regulations, or to submit a multi-state plan that allows for averaging of performance standards.<sup>32</sup>

Given the low level of reductions required of Idaho and a political climate that has not been supportive of a renewable portfolio standard to date, the federal regulation could have less of an impact on the market for renewables than proponents of solar might hope to see.

### What to watch

President Obama's Presidential Memorandum directed EPA to adopt final standards for existing power plants by June 1, 2015,<sup>33</sup> and EPA presently expects to finalize its rulemaking by that date.<sup>34</sup> If adopted, each state would be required to submit its plan to EPA by June 30, 2016, although EPA has proposed that states requiring additional time to submit a complete plan may submit an initial plan by June 30, 2016 and commit to submission of the complete plan by June 30, 2017 (for single state plans) or June 30, 2018 (for multi-state plans).<sup>35</sup>

As a result, the coming year could see some significant changes in Idaho's energy policies. If Idaho responds by requiring utilities to increase utilization of renewable energy sources, the state might see a corresponding increase in the availability of incentives for residential and commercial solar development within the state. But if Idaho responds by requiring installation of more stringent control technologies or focusing on energy efficiency measures, the effect on renewables will be slight. One thing, however, is certain — adoption of the proposed regulations at the federal level will force a discussion regarding the value and desirability of renewable energy

sources in Idaho that will require the input of utilities, environmental organizations, industry, developers of renewable energy projects, and the general public.

### Endnotes

1. See U.S. Department of Energy, Solar Energy Potential, available online at <http://www.energy.gov/maps/solar-energy-potential>.

2. See The Solar Foundation, State Solar Jobs Map (Feb. 2015), available online at <http://pre.thesolarfoundation.org/sites/thesolarfoundation.org/files/All%20States%20-%20Solar%20Jobs%20Map.pdf>.

If Idaho responds by requiring utilities to increase utilization of renewable energy sources, the state might see a corresponding increase in the availability of incentives for residential and commercial solar development within the state.

3. See Idaho Code § 63-3022C(1).

4. This assumes that the maximum \$5,000 deduction is taken each year by a taxpayer with a 7.4% income tax rate.

5. See 26 U.S.C. § 25D(a); see also 26 U.S.C. § 25D(g) ("The credit allowed under this section shall not apply to property placed in service after December 31, 2016").

6. See 26 U.S.C. § 48; see also 26 U.S.C. § 48(a)(2)(A)(i) (providing for an energy credit equal to an "energy percentage" of 30 percent of energy property "but only with respect to periods ending before January 1, 2017").

7. See Idaho Governor's Office of Energy

Resources, State Energy Loan Program, available online at <http://www.energy.idaho.gov/financialassistance/energy-loans.htm>.

8. See Database of State Incentives for Renewables & Efficiency (DSIRE), Renewable Portfolio Standard Policies (Sept. 2014), available online at [http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2015/01/RPS\\_map.pdf](http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2015/01/RPS_map.pdf) ("DSIRE RPS Map").

9. See Nev. Rev. Stat. § 704.7821.1; see also Nev. Rev. Stat. §§ 704.7805, 704.7811 & 704.7815 (defining "portfolio energy system or efficiency measure," "renewable energy," and "renewable energy system," respectively).

10. See DSIRE RPS Map.

11. See Utah Code § 54-17-602(1)(a) (establishing a target for electrical corporations); Utah Code § 10-19-201(1)(a) (establishing a target for municipal electric utilities). Renewable energy certificates may also be used to meet these goals. *Id.*

12. See DSIRE RPS Map.

13. See Nev. Rev. Stat. § 704.7821.2(a).

14. See Nev. Rev. Stat. §§ 704.7828.3(b) & 704.7828.6.

15. See Avista, Customer Generation, available online at <https://www.avistautilities.com/services/electricity/interconnection/Pages/default.aspx>; Idaho Power, Generator Interconnection Information, available online at <https://www.idahopower.com/aboutus/businessstobusiness/generationinterconnect/default.cfm>; Rocky Mountain Power, Interconnect Requests, available online at <https://www.rockymountainpower.net/env/nmcg/qf/ir.html>.

16. See DSIRE, Summary Maps, available online at <http://programs.dsireusa.org/system/program/maps> (Program Type: Interconnection; Technology: Solar Photovoltaics & Thermal Electric).

17. See DSIRE, Net Metering (Sept. 2014), available online at [http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2015/01/net\\_metering\\_map.pdf](http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2015/01/net_metering_map.pdf).

18. See DSIRE, Summary Maps, available online at <http://programs.dsireusa.org/system/program/maps> (Program Type: Property Tax Incentive; Technology: Solar Photovoltaics & Thermal Electric).

19. See Idaho Code §§ 63-602JJ & 63-3502B.

20. See DSIRE, Summary Maps, available

online at <http://programs.dsireusa.org/system/program/maps> (Program Type: Sales Tax Incentive; Technology: Solar Photovoltaics & Thermal Electric) (last visited March 11, 2015).

21. See Idaho Code § 63-3622QQ.

22. See 42 U.S.C. § 7411(b)(1)(A).

23. See 42 U.S.C. § 7411(b)(1)(B) (requiring standards of performance for new sources); 42 U.S.C. § 7411(d) (requiring standards of performance for existing sources).

24. See Environmental Protection Agency, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830, 34,838 (June 18, 2014) (proposed rule). These building blocks are required to reflect the degree of emission limitation achievable through the application of the “best system of emission reduction” (“BSER”) that EPA determines has been adequately demonstrated, taking into account the cost of achieving the reduction, any non-air quality health and environmental impacts, and energy requirements. See 42 U.S.C. § 7411(a) (defining “standard of performance”).

25. See *id.* at 34,954 (proposing at 40 C.F.R. 60.5795 the EGUs that must be addressed by the state plan).

26. See *id.* at 34,953 (proposing at 40 C.F.R. 60.5765 state rate-based carbon dioxide emissions performance goals, and proposing at 40 C.F.R. 60.5770 a procedure for converting the rate-based goal to a mass-based goal).

27. See *id.* at 34,953 (proposing at 40 C.F.R. 60.5765 compliance dates).

28. See *id.* at 34,957 (proposing at Table 1 to 40 C.F.R. Part 60 Subpart UUUU specific goals by state).

29. See *id.* at 34,951 (proposing at 40 C.F.R. 60.5710 a requirement to submit a plan).

30. See *id.* at 34,950 (proposing at 40 C.F.R. 60.5740 requirements for the contents of a state’s plan).

31. *Id.*

32. See *id.* at 34,952 (proposing at 40 C.F.R. 60.5745 to allow multi-state plans).

33. See Presidential Memorandum – Power Sector Carbon Pollution Standards (June 25, 2013), available online at [http://www.whitehouse.gov/the-press-](http://www.whitehouse.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards)

[office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards](http://www.whitehouse.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards).

34. See 79 Fed. Reg. at 34,838.

35. See *id.* at 34,952 (proposing timing requirements at 40 C.F.R. 60.5755).

## About the Author

**Alison M. Nelson** is senior counsel at Husch Blackwell LLP, a full-service litigation and business law firm with 600 attorneys in locations across the United States and in London. Ali is a member of the firm’s Energy and Natural Resources Strategic Business Unit, with a focus on environmental law. She is also the Chair of the Environmental & Natural Resources Law Section of the Idaho State Bar.

