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Ain't No Sunshine When It's Gone: The Future of the LouisianaSolar Initiative After the Demise of the Solar Energy Income TaxCredit

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INTRODUCTION

Global climate change is defined as "[a] well-documented rise in global temperatures [that] has coincided with a significant increase in the concentration of carbon dioxide in the atmosphere."[1] Global climate change is an immediate threat to the future of humanity,[2] and the United

1. Massachusetts v. EPA, 549 U.S. 497, 504 (2007).

States Supreme Court has recognized the importance of taking action for its abatement.[3] The effects of global climate change are tangible.[4] Global climate change causes sea levels to rise, affects the already disappearing Louisiana coastline, and increases the likelihood of hurricanes,[5] which cause widespread and catastrophic damage in Louisiana.[6] The emission of greenhouse gases into the atmosphere is a major cause of global climate change.[7] The greenhouse gases release into the air, where they build up in the atmosphere and trap heat from leaving the earth.[8] One-third of greenhouse gas emissions in the United States comes from electricity production.[9] The emissions are a product of the fossil fuel industry's electricity generation and the extraction, refining, and distribution of oil.[10] In stark contrast, the greenhouse gas emission from the manufacture, installation, and maintenance of renewable energy sources, such as solar power, is minimal.[11] Replacing greenhouse gas-producing electricity

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2. *Id.*; Shannon Baker-Bransletter, *Distributed Renewable Generation: The Trifecta of Energy Solutions to Curb Emissions, Reduce Pollutants, and Empower Ratepayers*, 22 VILL. ENVTL. L. J. 1, 4 (2011); *see also* JONATHAN M. HARRIS ET AL., GLOB. DEV. AND ENV'T. INST., THE ECONOMICS OF GLOBAL CLIMATE CHANGE 3 (2015).

3. *See generally Massachusetts*, 549 U.S. 497.

4. *See generally* U.S. GLOB. CHANGE RES. PROG., CLIMATE CHANGE IMPACTS IN THE UNITED STATES: HIGHLIGHTS, SOUTHEAST REGION (2016).

5. *Id.*

6. DAVID ROTH, NAT'L WEATHER SERV., LOUISIANA HURRICANE HISTORY 54 (2010), https://www.weather.gov/media/lch/events/lahurricanehistory.pdf [https://perma.cc/5QXY-ZCYZ].

7. One greenhouse gas is "[c]arbon dioxide . . .[, which, when] released into the atmosphere, . . . acts like the ceiling of a greenhouse, trapping solar energy and retarding the escape of reflected heat. It is therefore a species—the most important species—of a 'greenhouse gas.'" *Massachusetts*, 549 U.S. at 505; *see also* Baker-Bransletter, *supra* note 2, at 4; *see also* HARRIS ET AL., *supra* note 2, at 3.

8. *Benefits of Renewable Energy Use*, UNION OF CONCERNED SCIENTISTS (2013), http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/public-benefits-of-renewable.html#.V9wjFjs4nVp [https://perma.cc/46EK-YALG].

9. *See* ENVTL. PROT. AGENCY, EPA 430-R-12-001, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2010 (2012)*; see also How much of the U.S. carbon dioxide emissions are associated with electricity generation?*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/tools/faqs /faq.php?id=77&t=11 (last visited Nov. 11, 2017) [https://perma.cc/MG8X-XQET].

10. RABIA FERROUKHI ET AL., INT'L RENEWABLE ENERGY AGENCY, RENEWABLE ENERGY BENEFITS: MEASURING THE ECONOMICS 34 (2016).

11. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SPECIAL REPORT ON RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION (Ottmar

methods with solar power sources reduces the overall level of greenhouse gases.[12]

Many states take initiatives to adopt solar power and incentivize their citizens to do the same.[13] Louisiana's solar policy incentives increased demand at their outset, but they now fail to sustain solar utilization. The incentives also lack important characteristics that other states have used to increase demand successfully. Louisiana's solar policies are ripe for change and need to incorporate new policies that have become the national standard.

This Comment recommends a policy change in Louisiana's solar panel incentive structure. Part I provides a background on three solar panel incentive programs. Part II gives an overview of Louisiana's current solar incentive legislation. Part III surveys three states that have successful solar incentive policy programs, discusses the details of their programs, and analyzes why they have been successful. Part IV elaborates on the benefits provided by solar energy and argues that Louisiana should continue to incentivize solar energy, which will result in lowering the level of Louisiana's contribution to greenhouse gas emission without impacting the state's budget.

I. LEADING THE HORSE TO WATER

Every state incentivizes solar energy adoption.[14] Incentive programs vary greatly among the states and usually are very complicated. The three most influential incentive programs that states offer to increase solar panel demand are renewables portfolio standards, income tax credits, and net metering. Each incentive works uniquely to drive demand for solar energy adoption. Louisiana has chosen to implement some of these incentives, but those incentives often are inadequate.

Edenhofer et al. eds., 2012), https://www.ipcc.ch/pdf/special-reports/srren/SRREN_FD_SPM_final.pdf [https://perma.cc/V8Z8-VM45].

12. *See* N.Y. STATE ENERGY PLAN, RENEWABLE ENERGY ASSESSMENT 3 (2009), https://energyplan.ny.gov/-/media/nysenergyplan/final/Renewable_Energy_Assessment.pdf [https://perma.cc/E5UB-C9Q4]; *see also Sources of Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions (last visited Sept. 5, 2017) [https://perma.cc/E2PF-RSNX].

13. *See* DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR. (2016), http://www.dsireusa.org/ [https://perma.cc/596H-PWNU].

14. *Id.*

State solar incentives begin with statewide goals for renewable energy production.[15] States portray these goals in terms of megawatts produced by solar panels in the state.[16] For example, over the next five years, New York will attempt to install 2,910 megawatts of solar electric capacity in addition to the 716 megawatts already installed.[17] A discussion phrased in terms of megawatts is important because the amount of megawatts that a state produces is directly correlative to how many homes the state can power.[18] If solar power can support homes, property owners no longer need to rely on sources that produce greenhouse gases. One study estimates that a single megawatt of solar energy can power up to 164 homes per year.[19] The impact of solar energy becomes apparent in states like California, which has approximately 13,942 megawatts of solar energy production installed.[20] That many megawatts of solar energy can power over two million homes per year—dramatically reducing reliance on energy sources producing greenhouse gases.[21] To reach their goals for megawatt production, states offer incentives to consumers to adopt solar panels and commercial utility companies to derive power from renewable sources.[22]

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15. *See generally What's in a Megawatt?*, Solar Energy Indus. Ass'n, http://www.seia.org/policy/solar-technology/photovoltaic-solar-electric/whats-megawatt (last visited Dec. 18, 2017) [https://perma.cc/6ESE-SHXN].

16. *Id.* "Megawatts are used to measure the output of a power plant or the amount of electricity required by an entire city. One megawatt (MW) = 1,000 kilowatts = 1,000,000 watts. For example, a typical coal plant is about 600 MW in size." *How is Electricity Measured?*, UNION OF CONCERNED SCIENTISTS (2012), http://www.ucsusa.org/clean_energy/our-energy-choices/how-is-electricity-measured.html#.Wa9n8ciGOUk [https://perma.cc/LQ29-444U].

17. *New York Solar*, SOLAR ENERGY INDUS. ASS'N, http://www.seia.org/state-solar-policy/new-york (last visited Sept. 5, 2017) [https://perma.cc/2PC8-2DFW].

18. *How many homes can be powered by 1 megawatt of solar energy?*, SOLAR ENERGY INDUS. ASS'N, http://www.seia.org/about/solar-energy/solar-faq/how-many-homes-can-be-powered-1-megawatt-solar-energy (last visited Sept. 5, 2017) [https://perma.cc/8F7C-Q3PU].

19. *Id.*

20. *California Solar*, SOLAR ENERGY INDUS. ASS'N, http://www.seia.org/state-solar-policy/california (last visited Sept. 5, 2017) [https://perma.cc/AU62-2AJZ].

21. *Id.*

22. *State Renewable Energy*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/statelocalclimate/state-renewable-energy (last visited Sept. 5, 2017) [https://perma.cc/WL3B-BMVL].

A. Renewables Portfolio Standards

State goals for renewable energy production usually are expressed in a formal Renewables Portfolio Standard ("RPS"). RPSs are regulations that require utility companies in a state to produce or sell a certain amount of electricity from renewable sources by a certain future date.[23] The amount of renewable energy required increases gradually over time until the state meets its ultimate goal.[24] More than half of the states employ RPSs to pursue their goals.[25] The goal for renewable energy may be expressed as a percentage. For example, a state could require all utility companies to increase their renewable energy portion of all generation or sales by two percent each year for ten years.[26] At the end of ten years, renewable energy would account for 20% of the state's energy production and sales.[27]

An RPS is an essential part of a state's renewable energy policy, which, combined with other measures,[28] can increase the number of solar panels used by residents to generate clean, renewable energy.[29] RPSs also encourage cost competition between energy sources that produce greenhouse gases and renewable energy, making the option more attractive for residential participation.[30] Best practices for employing an RPS include a steady increase of expectations over time with a long enough duration to allow construction of renewable energy production technology to meet the goals.[31] Compliance costs associated with RPSs usually are dispersed across all utility ratepayers.[32]

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23. *Renewable Energy Standards*, SOLAR ENERGY INDUS. ASS'N, http://www.seia.org/policy/renewable-energy-deployment/renewable-energy-standards (last visited Sept. 5, 2017) [https://perma.cc/SMT2-NEKZ].

24. *Id.*

25. Some of the states are Washington, Oregon, California, Texas, Nevada, Utah, North Carolina, South Carolina, and Virginia. *Id.*

26. *Id.*

27. *Id.*

28. *See* discussion *infra* Part I.A.

29. *Renewable Energy Standards*, *supra* note 23.

30. *Id.*

31. *Renewable Portfolio Standards*, NAT'L RENEWABLE ENERGY LAB., http://www.nrel.gov/tech_deployment/state_local_governments/basics_portfolio_standards.html (last visited Dec. 18, 2017) [https://perma.cc/XZ9Z-P49K].

32. A "rate payer" is "one who pays for a utility service and especially electricity according to established rates." *Ratepayer*, MERRIAM-WEBSTER DICTIONARY, https://www.merriam-webster.com/dictionary/ratepayer?utm_campaign=sd&utm_medium=serp&utm_source=jsonld (last visited Sept. 9, 2017) [https://perma.cc/F7EW-MM72].

Most importantly, the program is mandatory and imposes fines on utility companies for noncompliance.[33]

State RPSs vary across the nation, depending on the state's commitment to renewable energy.[34] For example, North Dakota and South Dakota each had an RPS of ten percent by 2015.[35] More aggressive states, such as Kansas and Minnesota, have RPSs of 20% by 2020 and 26.5% by 2025.[36]

B. Income Tax Credits

States also use income tax credits[37] to incentivize solar installation.[38] States provide a tax credit for a portion of the purchase and installation of solar panels to offset the cost of installing solar energy for individual homeowners.[39] The tax credit incentive makes solar panels appealing and relatively affordable to potential solar panel owners because the potential owners can pass a portion of the cost of the panels to the government by withholding that portion from their annual tax liability.[40]

The federal government also subsidizes the implementation of solar technology with tax incentives.[41] Solar panel owners can lower their costs further by pairing state and federal tax credits. The federal government offers two tax incentives: the Business Energy Investment Tax Credit ("ITC")[42] for corporate entities and the Residential Renewable Energy

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33. NAT'L RENEWABLE ENERGY LAB., *supra* note 31.

34. *Renewable Portfolio Standard Policies*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2014/11/Renewable-Portfolio-Standards.pdf (last visited Sept. 5, 2017) [https://perma.cc/57UW-VAMT].

35. *Id.*

36. *Id.*

37. A tax credit is an amount that the government allows the taxpayer to offset the taxes he owes directly. U.S. DEP'T OF THE TREASURY, PUB. 17, No. 10311G, I.R.S. TAX GUIDE 2016 (2016).

38. Many states include a tax credit. Some of the states include Louisiana, Oregon, Montana, New Mexico, New York, Kentucky, Maryland, Arizona, Utah, and North Carolina. *Programs*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org (last visited Dec. 18, 2017) [https://perma.cc/8A57-3M5R].

39. Jeff Adelson, *Giving Away Louisiana: Solar Energy Tax Credit*, ADVOCATE (Dec. 6, 2014), http://www.theadvocate.com/baton_rouge/news/article _bdc02b75-0f1a-577d-92a4-31d04280c912.html [https://perma.cc/S4TN-NA9Z].

40. *Id.*

41. Geoff Keith et al., *The Hidden Costs of Electricity: Comparing the Hidden Costs of Power Generation Fuels*, CIVIL SOC'Y INST. 57–58 (Sept. 19, 2012).

42. I.R.C. § 48 (2012).

Credit ("RREC")[43] for individuals. Both of the credits provide a 30% tax credit for the installation of solar energy technology.[44] The average large residential solar panel system costs about $25,000.[45] Depending on the size of the state's income tax credit, residential customers may be able to write off as much as 80% of the cost of solar panel installation, bringing the initial price down from $25,000 to $5,000.[46] The federal tax credit also provides market certainty for companies to develop long-term investment and research plans.[47] Analysts estimate that the federal tax credit has helped the solar industry grow over 1,600% since its enactment in 2006.[48]

C. Net Metering

The final method that states use to incentivize solar energy is net metering. Net metering is a process allowing residential homeowners who produce electricity with solar panels to save money on their electricity bills.[49] Typically, the amount of power a home needs varies throughout the day.[50] A house may use more power to cool itself during a hot summer day and less at night when the temperatures are cooler. If the solar panels on a house produce more than the house needs at any given part of the day, the surplus energy is delivered to the power grid and effectively sold from the residence to the utility companies, where it can be delivered to other

43. *Id.* § 25D.

44. *Business Energy Investment Tax Credit (ITC)*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org/system/program/detail/658 (last updated Feb. 20, 2017) [https://perma.cc/YT4V-SM8K]; *Residential Renewable Energy Tax Credit*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org/system/program/detail/1235 (last updated Mar. 17, 2017) [https://perma.cc/K5UT-8JM9].

45. Adelson, *supra* note 39.

46. *Id.*

47. The federal tax credit provides market certainty because companies are able to bank on a certain amount of tax credits being available and, hence, continued demand for their services. *Solar Investment Tax Credit*, SOLAR ENERGY INDUS. ASS'N, http://www.seia.org/policy/finance-tax/solar-investment-tax-credit (last visited Nov. 16, 2017) [https://perma.cc/2RB4-FL4A].

48. *Id.*

49. Kevin Karges, *Net Metering: Do Non-Solar Homeowners and Utility Companies Have Legitimate Gripe?*, 3 ARIZ. J. ENVTL. L & POL'Y 1017, 1018 (2014).

50. *Net Metering*, SOLAR ENERGY INDUS. ASS'N, http://www.seia.org/policy/distributed-solar/net-metering (last visited Dec. 18, 2017) [https://perma.cc/6ULW-8KHL].

consumers.[51] If the house's need for power later exceeds what the solar panels can produce, the house uses power from utility companies.[52] At the end of the billing period, the house receives a credit from the utility company for the amount of solar energy it produced, and the house is charged only for the power it used from the utility company's net of the credit received.[53] Net metering serves as one of the most important incentives for consumers and a key driver of solar installation because it allows consumers to lower the cost of their electricity bills and incentivizes them to maintain their panels for a longer period of time.[54]

II. ON THE HOMEFRONT: LOUISIANA'S SOLAR INCENTIVES

Louisiana provides incentives to boost solar energy installation within the state. The simplest incentive it provides is a solar energy system property tax exemption.[55] Any equipment that is part of a solar energy system attached to a residential building is exempt from ad valorem taxation.[56] As long as the equipment uses the heat of the sun as its primary energy source and is used to heat or cool the interior of a structure, assessors will not consider the value of such equipment in assessing the value of buildings.[57] This incentive ensures that a homeowner will not incur an additional property tax by adding solar panels to a home.

Louisiana also allows net metering by allowing customers to sell their energy back to the utility company and only be billed for the net energy consumed from the utility.[58] To receive this benefit, customers must be located in Louisiana, generate solar energy for residential use with the intent to offset their own requirements for electricity, and have a generating capacity of no more than 25 watts.[59] Net metering encourages

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51. *Id.*
52. *Id.*
53. *Id.*
54. Baker-Bransletter, *supra* note 2, at 8.
55. LA. REV. STAT. § 47:1706 (2017).
56. § 47:1706(a). "An ad valorem tax, or property tax, is any tax that is based on the value of property owned by the taxpayer." Andrew M. Heacock, *The Frac-as Over Property Taxation of Louisiana Oil and Gas Wells*, 1 LSU J. OF ENERGY L. & RES. 179, 182 (2013); PATRICK H. MARTIN & BRUCE M. KRAMER, WILLIAMS & MEYERS, MANUAL OF OIL AND GAS TERMS (14th ed. 2009).
57. § 47:1706(a).
58. *Id.* § 51:3062.
59. *Id.* Up to 25 watts is a considerable threshold for size. The average size of a residential solar panel installation is between 1–5 watts. *Planning a Home Solar Electric System*, U.S. DEP'T. OF ENERGY, http://energy.gov/energysaver/planning-

the use of solar panel technology and investment in solar energy technology by allowing residents to contribute solar power to the grid.[60] It also encourages new energy technology manufacturers to open operations in Louisiana, providing more options for consumers, creating more jobs for residents, and stimulating Louisiana's economy.[61]

Louisiana statutes also provide interconnection standards that govern the process of connecting to the grid before net metering can occur.[62] The standards stipulate that utility companies must provide customers with a meter that tracks solar power produced.[63] Although utility companies pay the cost of the meter itself, customers typically must pay a one-time installation fee.[64]

The Louisiana Public Service Commission ("LPSC"), the regulator of net metering in Louisiana, publishes rules and guidelines for net metering in the state.[65] One of the rules enacted by the LPSC is a cap for net metering.[66] The cap allows utility companies that provide fossil-fuel and coal-manufactured power to stop accepting applications for new net metering customers after energy supplied by solar panel customers reaches 0.5% of the utility's peak retail demand.[67] In effect, the cap provides a way for utility companies to avoid net metering and brings net metering growth to a halt.

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home-solar-electric-system (last visited Sept. 12, 2017) [https://perma.cc/57E3-9Y9F].

60. LA. REV. STAT. § 51:3061.

61. *Id.*

62. *Id.* Interconnection standards "establish the terms and conditions under which public utilities must provide interconnection service to [small energy producers] . . ." Small Generator Interconnection Agreements & Procedures, Docket No. RM13-2-000 (FERC Jan. 17, 2013).

63. *See supra* note 62.

64. *Interconnection Guidelines*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org/system/program/detail/1083 (last updated Aug. 5, 2014) [https://perma.cc/Q3NG-C72V].

65. Authority to regulate net metering is provided for by legislation. LA. REV. STAT. § 51:3063.

66. *In re*: Re-examination of the Commission's Net Energy Metering Rules found in General Order No. R-27558, Docket No. R-31417 (La. Pub. Serv. 2011), http://lpscstar.louisiana.gov/star/ViewFile.aspx?Id=da62f01f-aedc-4211-9a41-7b9d19ccbe18 [https://perma.cc/VA22-WJJ5].

67. *Id.*

Two utility companies in Louisiana already have reached the cap provided by law.[68] Although the LPSC has required that utility companies continue to accept applications for net metering until it decides whether to increase the cap, reaching the cap has allowed Entergy Louisiana, LLC ("Entergy") to revise its billing structure for net metering clients who were interconnected to the grid after January 1, 2016.[69] For net metering clients interconnected prior to that date, customers are billed for the net power above what is produced via the normal process.[70] For customers interconnected after that date, Entergy places a lower value on the energy produced by solar power, meaning that the amount credited to customers' bills could be significantly lower, depending on the energy needs for the month.[71] The interconnection standards allow utility companies to charge customers an additional fee if the "costs of interconnection . . . outweigh the distribution system, environmental, and public policy benefits . . . ."[72] The statute does not provide a formula for calculating the environmental and public policy benefits.[73] Utility companies potentially could take advantage of this ambiguity and increase the fees associated with interconnection to dissuade consumers from implementing a solar panel system.

The most compelling incentive that Louisiana offers is the Solar Energy Income Tax Credit.[74] When the credit was implemented in 2007, it covered up to 50% of the first $25,000 of solar panel system purchase and installation.[75] There was no aggregate cap on the amount of tax credits issued.[76] At the end of 2014, more than 15,000 homes in Louisiana had installed solar panels, almost entirely due to the federal and state tax credit

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68. *Net Metering for Renewable Energy Resources*, ENTERGY LA., http://www.entergy-louisiana.com/your_home/net_metering.aspx (last visited Sept. 5, 2017) [https://perma.cc/S98U-5E5G].

69. *Id.*

70. *Id.*

71. The value of solar energy produced is now calculated based on Entergy's "average avoided cost, adjusted for line losses and daytime production." Herman K. Trabish, *Entergy Louisiana will reduce solar remuneration after hitting net metering cap*, UTILITYDIVE (Dec. 2, 2015), http://www.utilitydive.com/news/entergy-louisiana-will-reduce-solar-remuneration-after-hitting-net-metering/409989/ [https://perma.cc/N5RF-W444]. Prior to January 1, 2016, no value distinction was made between the energy a solar customer used and the energy they produced. *Id.*

72. LA. REV. STAT. § 51:3063 (2017).

73. *See id.*

74. *See* Adelson, *supra* note 39.

75. LA. REV. STAT. § 47:6030.

76. LA. REV. STAT. § 47:6030 (2007).

subsidies.[77] Originally, the tax credit was intended to be a marginal benefit to incentivize a small number of people.[78] Instead, it sparked dramatic interest, leading to a cost to the state 122 times the originally expected amount: approximately $151 million.[79] Some scholars speculate that without the credit, Louisiana would not have adopted solar power at all.[80]

The statute provided an end date for the tax credit as the end of 2017.[81] In 2015, Louisiana capped the tax credits available—despite the predetermined end date a mere two years in the future.[82] The cap retroactively applied to the beginning of the year and established annual caps for the remaining years of the program.[83] The retroactive amount available for 2015 was $10 million with another $10 million available for 2016 and $5 million available for 2017.[84] The maximum credit payable to a single homeowner also was lowered from $12,500 to $10,000.[85]

In 2016, the Louisiana Department of Revenue declared that all available funds for the tax credit had been exhausted.[86] Because the cap was retroactive, approximately $15 million in tax credits claims may go unsatisfied.[87] The statute lacked language to account for this situation or implement a phase-out system for the credits,[88] and no credits were awarded to residents who already had purchased solar panel systems.[89] Five solar customers filed suit, claiming that Louisiana had violated the customers' constitutional rights by imposing the retroactive cap.[90] The suit seeks class action status and claims to represent a potential class of over

77. *See* Adelson, *supra* note 39.

78. Originally, the tax credit was intended to assist approximately 40–100 customers and have about a $500,000 budget. *See* Adelson, *supra* note 39.

79. *Id.*

80. *Id.*

81. LA. REV. STAT. § 47:6030 (2015).

82. H.B. 779, 2015 Leg., Reg. Sess. (La. 2015).

83. *Id.*

84. *Id.*

85. *Id.*

86. Jennifer Larino, *Louisiana Has No More Tax Credits for Solar Owners*, TIMES-PICAYUNE (July 20, 2016), http://www.nola.com/business/index.ssf/2016/07/solar_tax_credit_reaches_limit.html [https://perma.cc/4EG4-9LKB].

87. *Id.*

88. H.B. 779, 2015 Leg., Reg. Sess. (La. 2015).

89. David Hammer, *Solar Customers Sue Louisiana Over Tax Credits*, WWLTV (Sept. 12, 2016, 8:01 PM), http://www.wwltv.com/news/investigations/solar-customers-sue-louisiana-over-tax-credits/317347198 [https://perma.cc/Q5P9-YHSJ].

90. *Id.*

2,000 solar customers.[91] State representatives have defended the cap, stipulating that it was imposed to ensure that solar panel providers could satisfy orders already received.[92] Unless the law is changed or the lawsuit succeeds, however, those $15 million in claims will go without payment.[93] The cap, subsequent exhaustion of the budget, and recent legal action led to a significant decline in solar panel demand in Louisiana.[94]

The short-term impact of the tax credit's removal is limited to the customers who already purchased solar panels,[95] but the long-term implications are more widespread. The tax credit was the only substantial incentive offered for potential solar panel customers in Louisiana, and the state now stands with only minimal incentives to promote solar panel installation.[96] The Louisiana legislature should devise a new incentive program with a budget-friendly focus that will foster and drive demand. A program encompassing both of these objectives will benefit the state and solar panel consumers.

III. STATE SURVEY OF SOLAR INCENTIVES

A few states are recognized as leaders in solar energy incentive and regulatory policy.[97] Each state can serve as a template for Louisiana's revised solar energy incentive program. The policies of New York, California, and Massachusetts present particular strengths that should be used as a model for Louisiana's regulatory plan.

A. New York

New York is a leader in solar regulatory policy, and the state's incentive program has succeeded dramatically.[98] Between 2012 and 2015, New York had a 575% growth in solar power installation.[99] The state is ranked seventh in the nation for solar panel installations and currently generates

91. *Id.*
92. *Id.*
93. *Id.*
94. *See* Larino, *supra* note 86.
95. *See, e.g.*, Hammer, *supra* note 89.
96. *See* Larino, *supra* note 86.
97. *See 2016 United States Solar Power Rankings*, SOLARPOWERROCKS, https://solarpowerrocks.com/2016-state-solar-power-rankings/ (last visited Nov. 16, 2017) [https://perma.cc/CQN2-RNYC].
98. *NY-Sun*, N.Y. STATE ENERGY RES. AND DEV. AUTH., https://www.nyserda.ny.gov/All-Programs/Programs/NY-Sun (last visited Dec. 18, 2017) [https://perma.cc/G85Y-YBMS].
99. *Id.*

enough solar energy to power approximately 100,000 homes.[100] The rise of the solar industry has sustained approximately 8,250 jobs in the state, and support for solar energy continues to rise according to Environment New York, an environmental advocacy organization.[101]

The New York State Energy Research and Development Authority ("NYSERDA") oversees the program.[102] NYSERDA was established in 1975 as a public benefit corporation, but its funding structure changed in 1996 when the New York State Public Service Commission approved funding—paid by taxpayers—to support the program's renewable energy endeavors.[103] NYSERDA has promoted solar panel installation in many ways. In addition to establishing a statewide goal of energy production,[104] NYSERDA incentivizes solar panel installation by subsidizing the cost of solar panels.[105]

One of the incentives NYSERDA offers is the New York Solar Tax Credit.[106] The tax credit was adopted in 1997 and applies to the cost of residential solar panel systems.[107] It differs from Louisiana's tax credit in a few key respects. First, the amount of the credit is lower. The New York Residential Solar Tax Credit provides a subsidy for 25% of the cost of solar panel cost and installation with a maximum of $3,750 for systems installed prior to 2006 and $5,000 per solar-energy system installed after 2006.[108] In addition, the tax credit lacks an expiration date.[109] Though the credit is lower than Louisiana's credit, it allows the state's budgeted dollars to spread to more consumers.

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100. Heather Leibowitz, *Report: New York Ranks 7th Nationwide for Solar Power*, ENV'T N.Y. (Aug. 24, 2016), http://www.environmentnewyork.org/news/nye/report-new-york-ranks-7th-nationwide-solar-power [https://perma.cc/3HYV-HMZY].

101. *Id.*

102. The goal of the NYSERDA is to "[s]erve as a catalyst – advancing energy innovation, technology, and investment; transforming New York's economy; and empowering people to choose clean and efficient energy as part of their everyday lives," *About NYSERDA*, N.Y. STATE, https://www.nyserda.ny.gov/About (last visited Dec. 18, 2017) [https://perma.cc/F3QA-TYLU].

103. *Id.*

104. *New York Solar*, *supra* note 17.

105. N.Y. TAX LAW § 606(g)(1) (McKinney 2017).

106. *New York Residential Solar Tax Credit, Program Overview*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECHN. CTR., http://programs.dsireusa.org/system/program/detail/80 (last updated Apr. 20, 2015) [https://perma.cc/WDD4-7KDC].

107. *Id.*

108. § 606(g)(1).

109. *New York Residential Solar Tax Credit, Program Overview*, *supra* note 106.

The second difference between New York's tax credit and Louisiana's lies in the method of financing. Louisiana provided the tax credits without any statutory support for additional funding mechanisms—perhaps because only a small demand was anticipated.[110] New York provides less of a financial incentive than Louisiana but finances the credit by collecting a funding fee from resident taxpayers in the state.[111] The funding fee's structure went through several iterations.[112] The first funding method was the System Benefits Charge ("SBC").[113] The SBC was established in 1996 by the New York Public Service Commission and was collected from utility ratepayers to support NYSERDA, allowing it to fund energy efficiency, education and outreach, research and development, and low-income energy assistance.[114] The SBC program ended pursuant to its statutory sunset in 2015.[115]

After the SBC ended, as a part of New York's comprehensive plan to reform the state's power industry,[116] the New York Public Service commission approved a new funding mechanism for NYSERDA: the Clean Energy Fund ("CEF").[117] The fund will conduct an annual collection from ratepayers from 2016 to 2020, with total collections decreasing each year.[118] Collecting a total of $585 million from ratepayers in 2016, the fund aims to collect a total of $1.5 billion over the course of its life.[119] The collected fees fund the NYSERDA and closely interact with flexible environmental goals.[120] For a period of ten years, the minimum goals of the CEF are to achieve 133 million tons of carbon dioxide reductions, $39 billion in customer bill savings, and stimulation of $29 billion in private investment.[121] The CEF will provide the

110. *See* LA. REV. STAT. § 47:6030 (2017); *see also* Adelson, *supra* note 39.

111. Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard, Case 07-M-0548 (N.Y. Pub. Serv. Comm'n Feb. 19, 2014).

112. *Id.*

113. *Id.*

114. *New York Clean Energy Fund (CEF)*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org/system/program/detail/5861 (last updated Feb. 22, 2017) [https://perma.cc/5X8F-PD8L].

115. *Id.*

116. This plan is called Reforming the Energy Vision ("REV"). *Id.*

117. Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Case 14-M-0094 (N.Y. Pub. Serv. Comm'n Jan. 21, 2016).

118. *See id.* at 7.

119. *Id.* at 11.

120. *Id.* at 11–12.

121. *Id.* at 50.

financial support for New York to combat climate change and grow its clean energy economy.[122]

New York also provides a sales tax incentive for solar panel systems.[123] The incentive provides a 100% exemption from state sales tax for the purchase and installation of solar energy systems and empowers local municipalities to offer the same exemption from local sales taxes.[124] The exemption provides an additional incentive for customers and could lower the overall cost of installing solar energy technology.

Another way that New York attempts to lower the barrier to entry is by providing cash incentives for residential and small commercial solar panel system installation.[125] NYSERDA pays the incentives to a select number of contractors who meet the state's qualifications for competency in installation of solar panel systems.[126] The contractors are paid a rebate based on each solar panel system's solar production.[127] Then, the contractor discounts the price of the system to the consumer by the full amount of rebates they received.[128]

The New York Public Service Commission has committed to an investment of $1 billion in the solar energy market with a goal of 3,000 megawatts of solar installations in the state by 2022.[129] This amount of solar power has the potential to increase output to a level that will power more than 492,000 homes in the state.[130] In addition to increasing total solar panel installations, the state has lowered the cost of solar energy.[131] The residential cost per watt was $8.59 in 2008 and has dropped to less than half of that figure in 2016: $4.28 per watt.[132] Building upon this

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122. *Governor Cuomo Launches $5 Billion Clean Energy Fund to Grow New York's Clean Energy Economy,* N.Y. STATE, https://www.governor.ny.gov/news/governor-cuomo-launches-5-billion-clean-energy-fund-grow-new-york-s-clean-energy-economy (last visited Dec. 18, 2017) [https://perma.cc/RK8E-ELP9].

123. N.Y. TAX LAW § 1115 (McKinney 2017).

124. *Id.*

125. N.Y. STATE ENERGY RES. AND DEV. AUTH., NY-SUN INITIATIVE RESIDENTIAL /SMALL-COMMERCIAL <200W SOLAR ELECTRIC SYSTEMS PROGRAM MANUAL 4 (Sept. 2016).

126. *Id.*

127. *Id.*

128. *Id.*

129. *New York Solar*, *supra* note 17.

130. Calculation based on the assumption that one megawatt of power will provide enough power for 164 homes in a year. *See generally What's in a Megawatt?*, *supra* note 15.

131. *See Local Cost of Solar (S/Watt) by Sector*, N.Y. SOLAR MAP, https://nysolarmap.com (last visited Dec. 18, 2017) [https://perma.cc/2A8C-RVHQ].

132. *Id.*

success, the state has committed to achieving 50% of total energy generation from renewable sources by 2030.[133]

The state's investment in solar panel installation also has been effective at combatting global climate change.[134] A study conducted by the New York State Energy Planning Board in 2015 tracked emission trends in the state.[135] The study recognized that approximately 26% of greenhouse gas emissions came from the residential sector, including electricity generation.[136] From 1990 to 2011, the state's emissions from electricity generated in-state dropped approximately 47% and were the major driver of New York's overall decrease in greenhouse gas emissions.[137] The reduction in greenhouse gasses has led to New York having the lowest energy-per-capita emissions in the nation.[138]

B. California

California currently leads the nation in solar panel installation and incentives.[139] California's Renewables Energy Portfolio Standard drives California's success.[140] Established in 2002, California's Renewables Portfolio Standard[141] was amended recently, changing its goal of 33% renewable energy produced and sold by 2020[142] to 50% by 2030.[143] Until recently, California had the most aggressive RPS in the nation.[144] Much like other states, California set interim goals to ensure that end goals are

133. *NY-Sun*, *supra* note 98.

134. N.Y. STATE ENERGY PLANNING BD., *The Energy to Lead: Impacts and Considerations*, *in* 2 NEW YORK STATE ENERGY PLAN 15 (2015).

135. *Id.* at 13.

136. *Id.* at 10.

137. *Id.* at 13.

138. *Id.* at 13–14.

139. *California Solar*, *supra* note 20.

140. *See* CALI. ENVTL. PROT. AGENCY: AIR RESOURCES BD., CALIFORNIA GREENHOUSE GAS EMISSIONS FOR 2000 TO 2015 – TRENDS OF EMISSIONS AND OTHER INDICATORS (June 6, 2017); *see also* CAL. ENERGY COMM'N, TRACKING PROGRESS, http://www.energy.ca.gov/renewables/tracking_progress/documents/renewable.pdf (last updated Aug. 2017) [https://perma.cc/C9JH-L5B3].

141. S.B. 1078, 2002 Leg., Reg. Sess. (Ca. 2002).

142. S.B. X1-2, 2011 Leg., Reg. Sess. (Ca. 2011).

143. CAL. PUB. UTIL. CODE § 399.11 (West 2017); CAL. PUB. RES. CODE § 25740 (West 2017).

144. New York increased their RPS to match California's. *Renewable Portfolio Standard Policies*, *supra* note 34.

met.[145] By the end of 2016, the state required that 25% of retail sales come from renewable energy sources and 40% by 2024, continuing up to 50% by 2030.[146] As of August 2016, the majority of California's utility companies were on track to meet the 2016 interim goal, with two of the major three already exceeding the threshold.[147]

The California Energy Commission regulates the portion of the RPS dealing with energy generation.[148] The commission first verifies that renewable energy generating facilities are eligible to contribute to the RPS and then uses a tracking system to ensure the contributions are counted accurately.[149] The California Public Utilities Commission sets rules and procedures for RPS compliance so retail sellers of electricity can conform to the standard and meet the goals.[150] The Air Resources Board, a segment of the California Environmental Protection Agency, imposes penalties on non-compliant publicly owned utility companies.[151] Penalty details still are being drafted.[152]

California also supports renewable energy production with net metering rules favorable to residential customers.[153] Net metering is an important part of California's incentive scheme because it encourages residents to participate and install solar panels.[154] Two main differences between California's and Louisiana's net metering policies cause a difference in consumer demand for solar panels. The first difference

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145. *California Renewables Portfolio Standard*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org/system/program/detail/840 (last updated Apr. 19, 2017) [https://perma.cc/R925-C44E].

146. § 399.11.

147. The latest numbers available are from April 2017: PG&E – 29.5%, SCE – 24.3%, SDG&E – 35.2%. *California Renewables Portfolio Standard (RPS)*, CAL. PUB. UTILS. COMM'N, http://www.cpuc.ca.gov/RPS_Homepage/ (last visited Sept. 5, 2017) [https://perma.cc/MJ59-WBY9].

148. *Id.*

149. *Id.*

150. *RPS Compliance Rules and Process*, CAL. PUB. UTILS. COMM'N, http://www.cpuc.ca.gov/RPS_Compliance/ (last visited Sept. 5, 2017) [https://perma.cc/X9J5-WG2Y].

151. S.B. X1-2, 2011 Leg., Reg. Sess. (Ca. 2011); S.B. 350, 2015 Leg., Reg. Sess. (Cal. 2015).

152. *California Renewables Portfolio Standard (RPS)*, *supra* note 147.

153. CAL. PUB. UTIL. CODE § 2827 (West 2017).

154. *California Net Metering*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org/system/program/detail/276 (last updated May 12, 2016) [https://perma.cc/L238-EYRP].

involves the interconnection standards imposed on utility companies. Louisiana mandates that utility companies allow interconnection and net metering, but California went beyond those requirements and established an expedited process whereby residential customers are given priority for installation.[155] In addition, California established minimum timelines for interconnection, requiring utility companies to respond and accept interconnection requests within a specified period of time.[156] The timelines keep barriers to interconnection minimal and allow customers to participate in net metering quickly and efficiently.[157] Removing barriers to interconnection encourages residential customers to consider and implement solar panels to receive the benefits of net metering.

The actual mechanics of net metering in California mirror the mechanics of net metering in Louisiana, where customers are billed only for the energy used above that what they produced.[158] In Louisiana, if customers net an excess of production, they are paid only for the excess when they terminate service with the utility company.[159] In California, utility companies are required to pay out net excesses to customers at the end of a 12-month cycle so customers see the benefits of producing solar energy in a short period of time.[160] In addition, customers are allowed to enter into 10, 15, or 20-year contracts with utility companies to sell the solar energy they produce.[161] This variation enables customers to mitigate the cost of maintaining a solar energy system and utility companies to procure more sources of renewable energy to meet the state's aggressive RPS over a long period of time.[162]

The second benefit of California's interconnection standards and net metering policy that is not realized in Louisiana is the higher cap for utility companies. In Louisiana, utility companies can refuse applications for new net metering clients, or at least revise their billing structures, when net

155. Order Instituting Rulemaking on the Commission's Own Motion to improve distribution level interconnection rules and regulations for certain classes of electric generators and electric storage resources, Decision 13-10-017 (CAL. PUB. UTIL. filed June 20, 2016).

156. *Id.*

157. *Interconnection*, INTERSTATE RENEWABLE ENERGY COUNCIL, http://www.irecusa.org/regulatory-reform/interconnection/ (last visited Dec. 18, 2017) [https://perma.cc/8QNA-GXZH].

158. *California Net Metering*, *supra* note 154.

159. *Net Metering for Renewable Energy Resources*, *supra* note 68.

160. CAL. PUB. UTIL. CODE § 2827(h)(2) (West 2017).

161. *Id.* § 399.20.

162. *California Net Metering*, *supra* note 154.

metering accounts for 0.5% of their aggregate peak demand.[163] California utility companies cannot refuse new connections until net metering accounts for five percent of their aggregate customer peak demand.[164] The interconnection standards also define "aggregate customer peak demand" and codify a methodology for calculation; thus, the calculation is not open to interpretation by utility companies.[165] A higher cap on net metering allows residential customers to avoid the scenario presented in Louisiana in which utility companies more easily refuse new net metering applications and inhibit progress toward widespread solar panel installation.

The benefits of California's solar panel regulation are demonstrated by the number of solar panel installations and solar energy production. In 2014, California installed more solar energy panels than the entire country did between 1970 and 2011.[166] California has 13,942 megawatts of solar energy currently installed—which is enough to power about 3.4 million homes—and anticipates installing an additional 22,645 megawatts of energy over the next five years.[167] Over 500,000 homes[168] contribute to these totals, providing energy through net metering and interconnection to the energy grid.[169] Over 2,700 companies participate in the solar industry in California, employing more than 75,598 people.[170] In 2015 alone, the state added 20,000 new solar jobs,[171] which pay, on average, $78,000 per year and provide health and pension benefits.[172]

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163. LA. REV. STAT. § 51:3063 (2017).

164. CAL. PUB. UTIL. CODE § 2827(c)(1).

165. A.B. 327, 2013 Leg., Reg. Sess. (Cal. 2013).

166. *California Solar*, *supra* note 20.

167. *Id.*

168. Contrast to Louisiana's 15,000 homes. *See* discussion *supra* Part II.

169. Bentham Paulos, *California Has More Solar Power Than You Think—A Lot More*, GREENTECH MEDIA (Aug. 11, 2016), https://www.greentechmedia.com/articles/read/california-has-more-solar-than-you-think [https://perma.cc/ED26-X3HC].

170. THE SOLAR FOUND., 2015 NATIONAL AND STATE SOLAR JOBS CENSUS 7 tbl.1 (2015).

171. Ivan Penn, *California Solar Industry Job Growth Reaches Record Levels*, L.A. TIMES (Feb. 10, 2016), http://www.latimes.com/business/la-fi-solar-industry-job-growth-20160209-story.html [https://perma.cc/RRU5-XGYG].

172. Peter Phillips, *Environmental and Economic Benefits of Building Solar in California*, UNIV. OF CAL., BERKLEY LABOR CTR. (Nov. 10, 2014), http://laborcenter.berkeley.edu/environmental-and-economic-benefits-of-building-solar-in-california-quality-careers-cleaner-lives/ [https://perma.cc/FVE4-D7GD]. Careers in solar energy include scientific researchers; solar power engineers; solar equipment manufacturers; solar power plant development, operations, and construction; and solar

In addition to the economic benefits, the increase in solar energy installation in California tangibly affects the environment.[173] The Air Resources Board maintains an inventory of California's greenhouse gas emissions.[174] An inventory released by the Board in 2015 shows that emissions fell by 1.5 million tons in 2013 and an additional 2.8 million tons in 2014.[175] Per capita emissions also declined from 2000 to 2014, from 13.9 tons per person to 11.4 tons per person.[176] The Board found that 20% of California's greenhouse gas emissions were caused by the energy industry.[177] From 2013 to 2014, emissions from the energy industry declined by 1.6%.[178] California's aggressive RPS and robust net metering interconnection standards have affected solar panel demand in the state significantly and materially impacted the environment and economy.

C. Massachusetts

Renewable energy in Massachusetts thrives, with Boston as the most energy efficient city in the nation.[179] The state expertly develops products that drive the solar market and generate demand for solar energy.[180] Its expertise has led to national recognition.[181] Massachusetts pairs an RPS with a Solar Renewable Energy Credit ("SREC") program.[182] Like many other states with RPSs in place, Massachusetts provides solar energy

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panel installation. JAMES HAMILTON, U.S. BUREAU OF LAB. STAT. REPORT 2: CAREERS IN SOLAR POWER 7–18 (June 2011).

173. CAL. ENVTL. PROT. AGENCY: AIR RES. BD., NEWS RELEASE 15-37, CALIFORNIA GREENHOUSE GAS INVENTORY SHOWS STATE IS ON TRACK TO ACHIEVE 2020 AB 32 TARGET (June 30, 2015).

174. *Id.*

175. *Id.*; CALIFORNIA GREENHOUSE GAS EMISSION INVENTORY FOR 2000 TO 2015, *supra* note 140.

176. CALIFORNIA GREENHOUSE GAS EMISSION INVENTORY FOR 2000 TO 2015, *supra* note 140.

177. *Id.*

178. *Id.*

179. Erin Ailworth, *Studies Cite Gains in Mass. Renewable Energy Industry*, BOS. GLOBE (Sept. 17, 2013), https://www.bostonglobe.com/business/2013/09/17/boston-tops-energy-efficiency-ranking-shows/e0YgNTajPTvgR5QiTbnq0L/story.html [https://perma.cc/BF4V-KUJS].

180. *Id.*

181. *Id.*

182. *See Solar Power Performance Payments*, SOLARPOWERROCKS, https://solarpowerrocks.com/massachusetts/#perf_payments (last visited Sept. 5, 2017) [https://perma.cc/F5LX-67NT].

producers with credits for each megawatt of energy generated.[183] The credits are issued by the Massachusetts Department of Energy Resources ("DOER") and are tradable between solar power producers and utility companies.[184] For utility companies to meet Massachusetts's RPS of 15%,[185] utility companies must purchase credits to supplement their own renewable energy production, and non-compliant companies are subject to large fines.[186] Purchase of a credit equates to production of the same amount of solar energy, and the credit counts toward the utility company's satisfaction of the RPS requirement.[187] The payment for the credits made to consumers by utility companies provides an additional incentive for consumers to install solar power by providing compensation for solar power generation.[188]

The process of administering the credit is simple. After the DOER verifies that a megawatt of renewable energy has been created, it assigns the certificate and allows electricity suppliers and retailers to purchase the certificates from generators, including residential customers.[189] Market economics of supply and demand drive prices for the credits, but each year, the DOER hosts a Solar Credit Clearinghouse Auction in which it coordinates sale of the credit to energy suppliers and assigns a price floor for each credit fixed by year.[190] The DOER also collects an additional fee called the Solar Alternative Compliance Payment per credit sold at the auction to help fund other RPS-related incentives.[191]

183. MASS. GEN. LAWS ch. 25A, § 11F (2017).

184. *Massachusetts Solar Renewable Energy Certificates (SREC-II)*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECH. CTR., http://programs.dsireusa.org/system/program/detail/5679 (last updated Feb. 16, 2015) [https://perma.cc/56JR-RRUY].

185. ch. 25A, § 11F.

186. The fines also are known as "Alternative Compliance Payments." *See Alternative Compliance Payment Rates*, MASS. DEP'T. OF ENERGY AND ENVTL. AFFAIRS, http://www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/rps-aps/retail-electric-supplier-compliance/alternative-compliance-payment-rates.html (last visited Sept. 5, 2017) [https://perma.cc/R79L-8PZ2].

187. *Massachusetts Solar Renewable Energy Certificates (SREC-II)*, *supra* note 184.

188. *See Solar Power Performance Payments*, *supra* note 182.

189. *Massachusetts Solar Renewable Energy Certificates (SREC-II)*, *supra* note 184.

190. *Id.*

191. *Id.*

In 2008, as a part of the SREC program, Massachusetts established a goal for renewable energy production of 400 megawatts by 2017.[192] It exceeded the goal four years early and revised the SREC structure to lower the value of the certificate over time as the total amount of installations rose and the cost of solar projects decreases.[193] With this long-term phase-out structure implemented, Massachusetts can avoid one of the pitfalls associated with tradable solar credits: a spike and subsequent decrease in solar credit demand.[194] New Jersey and Pennsylvania suffered this reaction; projects were either built too fast—satisfying the state's RPS goal too quickly—or out-of-state energy was allowed to count for in-state RPS goals.[195] Prices for solar credits deflated quickly thereafter.[196]

Since implementation of the RPS and SRECs, Massachusetts has seen rampant growth in solar utilization, with more than 69,000 installations as of April 2017.[197] Massachusetts's solar programs have been successful at combatting the effects of global climate change, leading to reductions in greenhouse gas emissions and a lower reliance on coal, oil, and natural gas energy production every year.[198]

IV. DON'T LET THE SUN SET ON SOLAR

Louisiana needs to continue subsidizing solar panel installation because of its many benefits. The new incentive structure should be modeled after the most successful components of the New York, California, and Massachusetts incentive programs and avoid additional budget strains where possible. The additional, unavoidable costs are outweighed by the environmental, health, and economic benefits that result from increasing solar panel installation and reducing reliance on sources that produce greenhouse gases.

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192. Jesse Grossman, *A Call to Preserve the Solar SREC Program in Massachusetts*, RENEWABLE ENERGY WORLD (Feb. 18, 2015), http://www.renewableenergyworld.com/articles/2015/02/a-call-for-continued-solar-srec-commitment-in-massachusetts.html [https://perma.cc/TZ4K-8JR3].

193. *Id.*

194. *Id.*

195. *Id.*

196. *Id.*

197. Installed Solar Capacity in Massachusetts, MASS. DEP'T. OF ENERGY RES., http://www.mass.gov/eea/docs/doer/renewables/installed-solar.pdf (June 2017) [https://perma.cc/7YA7-BTYM].

198. "Emission reductions average 1.4% for CO2, 0.8% for NOx, and 1.7% for SO2 per year." LA CAPRA ASSOCS., INC. ET AL., TASK 3B REPORT: ANALYSIS OF ECONOMIC COSTS AND BENEFITS OF SOLAR PROGRAM 7 (Sept. 30, 2013).

A. Solar Energy Benefits

Solar energy is a renewable energy source with many benefits.[199] First, solar energy generation has a smaller impact on global climate change when compared to fossil fuel-based energy production.[200] Solar energy produces less greenhouse gas emissions than either fossil fuel or coal energy production.[201] One study found that if the United States replaced 25% of its energy production with renewable energy, greenhouse gas emissions would be lowered by the equivalent of emissions from 70 coal-powered plants.[202]

In addition to reducing the greenhouse gases emitted from carbon-based electricity generation, increasing the amount of renewable energy sources positively affects health and wellness. Coal and natural gas power plants produce air and water pollution that has been linked to various health problems and diseases.[203] Most renewable energy sources, including solar power, produce zero air and water pollutants.[204] A Harvard study determined that reducing greenhouse gas emissions has the potential to save monetized public health systems between $5.7 and $200 million by avoiding payment for treatment of illnesses associated with greenhouse gases.[205] Environmental Protection Agency ("EPA") Administrator Gina McCarthy declared that by tackling climate change, "[w]e can save tens of thousands of American lives, and hundreds of billions of dollars, annually in the United States by the end of this century . . . ."[206]

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199. Solar energy is energy that is collected from a "solar energy system [meaning] any device that uses the heat of the sun as its primary energy source . . . ." LA. REV. STAT. § 47:1706 (2017).

200. Keith et al., *supra* note 41.

201. *Id.*

202. *Clean Power Green Jobs Fact Sheet*, UNION OF CONCERNED SCIENTISTS (Mar. 2009), http://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_energy/Clean-Power-Green-Jobs-25-RES.pdf [https://perma.cc/3JC9-Y5WG].

203. The most notable health issues and diseases are breathing problems, neurological damage, heart attacks, and cancer. *Benefits of Renewable Energy Use*, *supra* note 8.

204. *Id.*

205. Jonathan J. Buonocore et al., *Health and climate benefits of different energy-efficiency and renewable energy choices*, NATURE CLIMATE CHANGE (Aug. 31, 2015), http://www.nature.com/nclimate/journal/v6/n1/full/nclimate2771.html?foxtrotcallback=true [https://perma.cc/N4YW-XKDG].

206. Andrea Thompson, *Action on Climate Key to Health, Reports Say*, CLIMATECENTRAL (June 23, 2015), http://www.climatecentral.org/news/climate-action-global-health-19149 [https://perma.cc/VEJ4-LQYE].

Increased utilization of solar energy also has a large economic impact, leading to an increase in solar jobs created in the United States.[207] In 2015, the United States had more than 209,000 solar jobs, with a staggering 20.2% increase in total jobs from 2014.[208] Solar energy production requires more manufacturing, installation, and maintenance than traditional fossil fuel energy production and, therefore, more workers.[209] Solar jobs are expected to grow nationally an additional 14.7% in 2016.[210] Louisiana also has benefited from increased jobs created in the solar industry. In 2015, 1,974 jobs in the state were in a solar-energy related capacity.[211] Although Louisiana exceeds the national average for solar jobs created, additional growth is stunted by current solar incentive policy.[212]

B. It's Not All Sunshine and Rainbows

Not all scholars agree that incentivizing installation of solar energy is a good thing, and critics of solar power incentives present compelling arguments. The first argument alleges that solar power does not provide an economic benefit because it is marketed as a cheaper alternative to traditional fossil fuel and coal power in states without high electricity prices.[213] High electricity prices are one of the reasons that solar power has been so successful.[214] For example, in New York and California, electricity prices are very high.[215] On the contrary, Louisiana has one of the lowest electricity prices

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207. *Benefits of Renewable Energy Use*, *supra* note 8.

208. THE SOLAR FOUND., *supra* note 170, at 1.

209. *Benefits of Renewable Energy Use*, *supra* note 8.

210. *Id.*

211. THE SOLAR FOUND., *supra* note 170, at 103.

212. *See id.*

213. *See* Sophie Vorrath, *How Solar + Storage Can Be Cheaper Than Coal*, CLEAN TECHNICA (May 13, 2016), https://cleantechnica.com/2016/05/13/solar-storage-can-cheaper-coal [https://perma.cc/738A-3EEM]; *see also* Tom Randall, *Wind and Solar Are Crushing Fossil Fuels*, BLOOMBERG (Apr. 6, 2016), https://www.bloomberg.com/news/articles/2016-04-06/wind-and-solar-are-crushing-fossil-fuels [https://perma.cc/XD5S-WGJN].

214. *See New York 2016 Solar Report Card*, SOLARPOWERROCKS, https://solarpowerrocks.com/new-york/ (last visited Sept. 6, 2017) [https://perma.cc/S3RM-KWQW]; *see also California 2016 Solar Report Card*, SOLARPOWERROCKS, https://solarpowerrocks.com/2016-state-solar-power-rankings/#CA (last visited Sept. 5, 2017) [https://perma.cc/XKU3-YXQ6].

215. California and New York's average price of electricity is $0.17/kwh, which is almost 50% more than the national average of $0.13/kwh. *See New York 2016 Solar Report Card*, *supra* note 214; *see also California 2016 Solar Report Card*, *supra* note 214.

in the nation.[216] Therefore, the argument is that the state should not subsidize or incentivize solar power because the economic benefits for residents are minimal.[217]

Regardless of the low price of electricity in Louisiana, a savings still can be realized, and Louisiana residents can benefit from any reduction in costs. According to the United States Census Bureau, Louisiana has the third lowest average income in the nation for single income families.[218] Economic arguments also fail to acknowledge the environmental benefits of renewable energy.[219] Even in states with lower electricity rates, the negative effects of greenhouse gas emissions are tangible, including coastal erosion from rising gulf water and hurricane activity.[220] The extreme cost incurred by the state and individuals because of hurricanes and coastal erosion are worth avoiding—even if the electricity bill savings are not dramatic.[221] Viewing savings in the narrow context of utility bills ignores the larger and more catastrophic effects of global climate change.

Some commentators also express concern for the impact that widespread solar panel installation has on protected natural environments, particularly in California.[222] California's protected areas are reserved for open space

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216. Louisiana's average price of electricity is $0.09/kwh. *See Louisiana 2016 Solar Report Card*, SOLARPOWERROCKS, https://solarpowerrocks.com/louisiana/ (last visited Sept. 5, 2017) [https://perma.cc/GZ2A-TN23].

217. *Id.*

218. Only Arkansas and Mississippi have lower single-earner household incomes. U.S. TRUSTEE PROG., U.S. DEP'T OF JUSTICE, STATE MEDIAN FAMILY INCOME BY FAMILY SIZE (Apr. 30, 2014), https://www.justice.gov/ust/eo/bapcpa/20141101/bci_data/median_income_table.htm [https://perma.cc/VB7U-YQ7L].

219. Jennifer Larino, *Do Solar Power Costs Outweigh Benefits? New Study Reignites Old Debate*, TIMES-PICAYUNE (Apr. 3, 2015), http://www.nola.com/business/index.ssf/2015/04/solar_dismukes_net_metering.html [https://perma.cc/67XA-XCDV].

220. *See* INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2010, *supra* note 9; *see also How much of the U.S. carbon dioxide emissions are associated with electricity generation?*, *supra* note 9.

221. As an example of the damage that could arise from global warming's impact on weather patterns, the total estimated economic losses from Hurricane Katrina exceeded $125 billion. FED. EMERGENCY MGT. AGENCY, FEMA 548, SUMMARY REPORT ON BUILDING PERFORMANCE: HURRICANE KATRINA 2005, at 1–5 (Apr. 2006) https://www.fema.gov/media-library-data/20130726-1446-20490-0294/548_SumRprt0329fnl.pdf [https://perma.cc/UH4R-A44Z].

222. Rebecca R. Hernandez et al., *Solar energy development impacts on land cover change and protected areas*, 12 PROCEEDINGS OF THE NAT'L ACAD. OF SCIENCES OF THE U.S.A., NO. 44, at 13579 (2015).

activities, including the state's national parks.[223] In California, the majority of utility-scale solar installations are in natural environments less than 6.5 miles away from protected areas.[224] When solar panels are built near protected areas, the location prevents the public from freely accessing protected areas and enjoying them to the fullest degree.[225] Indigenous species that inhabit the area also may be driven away from their natural habitat.[226] Louisiana has conservation laws to protect similar natural environments, but the impact solar panels have on Louisiana's protected areas has not been explored.[227] Future developments in solar policy should be proactive to avoid impacts on protected natural areas. One potential solution is to locate solar farms in degraded areas, such as salt-contaminated lands unsuitable for agriculture.[228] Many large, unoccupied spaces such as barn roofs and empty parking lots could serve as replacement sites for solar panels that would impose on protected environments.[229]

Another argument against incentivizing solar panel installation is that government incentives do not drive solar panel installation as well as other factors.[230] A recent study conducted at Vanderbilt University analyzed solar panel installation in San Diego County from 2007 to 2013[231] and concluded that reducing or increasing the rebate levels offered in California would have little impact on how many homes installed solar panels over that period of time.[232] The study found that peer influence, as opposed to financial incentives, was more influential on individuals considering solar panels.[233] The more solar panels installed in an individual's neighborhood, the more likely the individual would install solar panels himself, regardless of the rebates offered.[234] The study fails, however, because it only compares two influential factors: financial incentives and peer influence.[235] Other potential

223. *Updated Protected Areas GIS Data for California*, CAL. PROT. AREAS DATABASE (June 1, 2016).

224. Hernandez et al., *supra* note 222.

225. *Id.*

226. *Id.*

227. *See* LA. REV. STAT. § 9:1273 (2017).

228. *Id.*

229. *Id.*

230. David Salisbury, *California's Solar Incentive Program Has Had Only Modest Impact On Adoption Rates*, RESEARCH NEWS @ VANDERBILT (Apr. 7, 2015), https://news.vanderbilt.edu/2015/04/07/californias-solar-incentive-program-has-had-only-modest-impact-on-adoption-rates/ [https://perma.cc/NAB2-G363].

231. *Id.*

232. *Id.*

233. *Id.*

234. *Id.*

235. *Id.*

factors that influence behavior were excluded from the study, leading to an incomplete analysis.[236] The study's results should not be considered credible because the study did not factor in other considerations, such as the value an individual places on global climate change. In addition, Louisiana does not have as many solar panels installed as California and, thus, not as much peer influence. Therefore, the beneficial effects of financial incentives, although less compelling than peer influence, should not be discounted for an area with a low amount of peer influence.

Additionally, solar panel incentives already have been successful.[237] The income tax credit encouraged customers to purchase solar panels and raised awareness about global climate change and the harmful effects of greenhouse gases in the state.[238] Between 2008 and 2011, 8,574,930 kilowatt-hours of electricity were produced in Louisiana.[239] If these installed systems produce for the system's estimated lifetime, the solar panels will produce approximately $9,946,274 of electricity that Louisiana does not have to source from other states or acquire via greenhouse gas-emitting production.[240] After only four years with the tax credit in place, Louisiana has produced enough solar energy to avoid 5,936 metric tons of carbon dioxide-equivalent emission production.[241] Louisiana presents a great market for the continuation of solar technology, as the state receives more than five hours of average sun exposure in a day.[242] The support of solar energy also presents Louisiana as a forward-thinking, technologically advanced, and environmentally friendly state, which is important for increasing solar power awareness in the state.[243]

Utility companies have lobbied against net metering, arguing that the installation of solar panels causes the utility companies to lose fees they would earn if homeowners were not generating their own power.[244] They also argue that the cost of net metering is not absorbed by the utility but shifted to other ratepayers who may not have an interest or the means to

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236. *Id.*

237. LA. SOLAR ENERGY SOC'Y, IMPACT STUDY OF LOUISIANA SOLAR TAX CREDIT 3 (2011).

238. *Id.*

239. *Id.*

240. *Id.*

241. *Id.*

242. *Id.*

243. *Id.*

244. *The Fight to Put a Value on Rooftop Solar Power: Understanding Critical Issues in the Nation's Rapidly Changing Electricity Markets*, CLIMATE NEXUS, http://climatenexus.org/climate-issues/energy/the-net-metering-fight/ (last visited Nov. 16, 2017) [https://perma.cc/C9EB-LRAE].

support solar panels.[245] In addition, the power grid still is needed for solar panels.[246] The utility companies maintain the power grids and use the fees collected to maintain the grid infrastructure—including power lines that deliver energy.[247] Without the fees collected from power use, utility companies urge that they are unable to maintain the power grid infrastructure necessary to meet their legal obligation to provide consistent power to consumers.[248]

Benefits to increased solar power outweigh the costs and balance the scale on utility imposition. Solar power use leads to fewer fees collected and reduces strain on the power grid when demand is abnormally high in the summer months.[249] During these months, utility companies are unable to keep up with demand and must purchase power from neighboring states or producers. Increases in solar power generation lessen the demand for more expensive, imported power.[250] In addition, although solar power customers use the grid without paying additional fees, increased solar power also lessens the need to build new and expensive power generation facilities, potentially saving utility companies millions of dollars.[251] Lastly, the environmental benefits of increased solar power are worth the expense. Greenhouse gases are being produced at an alarming rate—increasing the global temperature and impacting weather conditions.[252] The need for change is great, and solar panels offer efficient means to combat climate change.

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245. *Id.*

246. "Electricity is generated at power plants and moves through a complex system, sometimes called the *grid*, of electricity substations, transformers, and power lines that connect electricity producers and consumers." *How Electricity Is Delivered To Consumers*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/index.cfm?page=electricity_delivery (Aug. 17, 2017) [https://perma.cc/BUY9-2GQD].

247. *The Fight to Put a Value on Rooftop Solar Power*, *supra* note 244.

248. *Id.*

249. *Id.*

250. *Id.*

251. *See, e.g.*, *Cost and Performance Characteristics of New Generating Technologies, Annual Energy Outlook 2017*, U.S. ENERGY INFO. ADMIN. (Jan. 2017), https://www.eia.gov/outlooks/aeo/assumptions/pdf/table_8.2.pdf [https://perma.cc/8YKF-HEAA].

252. "Worldwide, net emissions of greenhouse gases from human activities increased by 35 percent from 1990 to 2010." *Climate Change Indicators: Greenhouse Gases*, U.S. ENVTL PROT. AGENCY (2017), https://www.epa.gov/climate-indicators/greenhouse-gases [https://perma.cc/P2UR-DSEJ].

C. Louisiana's Plan for the Future

The Louisiana Legislature should implement a new solar panel incentive program and continue solar panel installation in the state after the demise of the income tax credit. Louisiana will be able to lessen its reliance on coal, natural gas, and fossil fuel energy production by increasing solar panel use.[253] Doing so will lead to lower greenhouse gases, a healthier population and environment, and an increase in jobs in the solar industry.[254] Because of budgetary concerns, the new program can rely on consumer funding and offer incentives that do not require additional state funding. Louisiana should mold its new policy based on the insight gained from the incentive programs in New York, California, and Massachusetts. To that end, the new policy needs to keep the tax credit and net metering programs—with revisions—and include RPSs with tradable energy credits to regulate compliance with the standard.

Although Louisiana's tax credit was successful in generating solar panel demand, it was unable to survive long term.[255] Its untimely demise was because of unexpectedly high demand for the credit and because the credit amount exceeded the market average by a substantial amount.[256] The tax credit still is a necessary component of the incentive plan and needs to be included. Although solar panels provide a long-term economic benefit in the form of lower electricity bills, the return is realized only in small amounts monthly.[257] The high initial cost of solar panel purchase and installation is high enough to be prohibitive for many Louisianans.[258] The tax credit is necessary to make the entry cost manageable and economic benefits realizable for residential customers, but it should be revised for efficiency and long-term effectiveness.

1. The Tax Credit

Though the tax credit is an essential component of Louisiana's solar incentive policy, it must be revised. Taking note of New York's program, the Louisiana legislature should lower Louisiana's new tax incentive substantially. Instead of offering 50% of the cost of solar panels up to $10,000, the new credit should be 30% of the cost of purchase and

253. RENEWABLE ENERGY ASSESSMENT, *supra* note 12, at 4; *see also Sources of Greenhouse Gas Emissions*, *supra* note 12.

254. LA. SOLAR ENERGY SOC'Y, *supra* note 237.

255. Larino, *supra* note 86.

256. *Id.*

257. Baker-Bransletter, *supra* note 2, at 8.

258. Adelson, *supra* note 39.

installation, up to $5,000. This new percentage still provides a cushion for buyers and ensures that the funds are available to more people. It also will serve to make Louisiana's new progress enduring, leading to a long-term impact on the environment.

The tax credit also requires funding from consumers to ensure its longevity. Again, following New York's lead, Louisiana can implement a system by which utility companies collect a surcharge from energy consumers to fund the tax credit.[259] Although system implementation is a burden on energy consumers, it provides an additional incentive to purchase solar energy and helps to encourage widespread installation of solar energy across the state. Doing so ultimately will lower energy prices across the board as more solar power is installed. Even if the economic benefits from the tax are slow to materialize, the environmental benefits are abounding.[260] The additional tax also can be structured to phase out over time, after funding goals are met. This way, taxpayers are not exposed to an additional burden indefinitely. New York's program has been successful at mitigating greenhouse gases by committing to promotion of solar energy.[261] The tax credit is a piece of New York's incentive structure.[262] Louisiana may reap the same rewards with a revised version of the tax credit. The demand for solar panels has been demonstrated by the response to Louisiana's first solar panel tax credit.[263] The demand may evidence that Louisiana's citizens are willing to commit to renewable energy and create a healthier environment by contributing to the fund. The tax credit also should be structured to phase out over a period of time so that as demand increases and eventually remains constant with the help of other incentives, the tax payer burden will be lifted. The phase-out may lessen the blow that ending of the tax credit had on industry and demand.

2. Net Metering and Interconnection Standards

The second portion of Louisiana's new solar incentive policy should implement revised net metering rules and interconnection standards. Increasing the net metering cap will require utility companies to accept more net metering connections. State net metering caps vary across the

259. Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Case 07-M-0548 (N.Y. Pub. Serv. Comm'n Jan. 21, 2016).

260. FERROUKHI ET AL., *supra* note 10, at 34.

261. *The Energy to Lead: Impacts and Considerations*, *supra* note 134, at 8.

262. *New York Residential Solar Tax Credit, Program Overview*, *supra* note 106.

263. Adelson, *supra* note 39.

nation, with the highest being at six percent of a utility's peak demand.[264] Louisiana's 0.5% cap represents the lower end of caps nationally and severely restricts additional net metering connections.[265] Louisiana should implement a higher cap that allows for growth but does not impose the maximum burden on utility companies. With six percent being the highest in the country and consumers approaching the 0.5% limit in Louisiana, the cap should be increased to two percent with room to increase if demand grows over the coming years. Increasing the cap will allow room for solar panel growth without unreasonably burdening utility companies with the highest market cap.

3. Renewables Portfolio Standard

Adopting an RPS is essential for Louisiana to enforce its commitment to increase solar utilization and effect environmental change. Louisiana is one of only 13 states without an RPS.[266] The RPS not only will communicate to the rest of the nation that Louisiana is forward thinking and committed to its program, it also will require that utility companies commit to sourcing renewable energy. RPSs form the cornerstone of all other solar incentive programs and are integral to incentivizing residential customers to install solar energy by requiring utility companies to accommodate increased solar panel usage.[267]

The biggest challenge that the Louisiana RPS will face is its previous dismissal as unnecessary. In 2013, the LPSC chartered a study to determine if an RPS was warranted for the state.[268] The study concluded that an RPS was not needed and provided two reasons: (1) renewable energy generation cost more than conventional energy generation, particularly given the low cost of natural gas; and (2) federal interest in mandatory RPS goals appeared to be

264. New York: 6%; California: 5%; Nevada: 3%; and New Jersey: 2.5%. BENJAMIN INSKEEP ET AL., N.C. CLEAN ENERGY TECH. CTR. AND MEISTER CONSULTANTS GRP., THE 50 STATES OF SOLAR: A QUARTERLY LOOK AT AMERICA'S FAST-EVOLVING DISTRIBUTED SOLAR POLICY CONVERSATION, Q2 2015 (2015), http://www.mc-group.com/wp-content/uploads/2015/08/50-States-of-Solar-Q2-2015-final1.pdf [https://perma.cc/GT7J-YNKX].

265. *See id*.; *see also supra* note 66 and accompanying text.

266. *Renewable Portfolio Standard Policies*, *supra* note 34.

267. *Renewable Energy Standards*, *supra* note 23.

268. The study was called the "Renewable Energy Pilot Program." *In re* Re-study of the feasibility of a renewable portfolio standard for the State of Louisiana, Docket No. R-28271 (La. Pub. Serv. Comm'n Oct. 13, 2010) [hereinafter Docket No. R-28271].

limited at the time.[269] The information used in this study, however, was not sourced from independent organizations but was collected by utility companies.[270] Because utility companies oppose solar incentives, the LPSC only considered information collected from in-state utility companies as to the viability of solar power and trends in other states.[271] The study lacked independent and impartial input and should be discredited on that basis. The study's findings also are debatable. The committee considered only the short-term cost of implementing renewable energy sources as opposed to the cost of maintaining current infrastructure designed to support natural gas energy generation.[272] Although the cost of installing renewable energy technology may be expensive on the front-end, the benefits are dramatic and costs significantly less in the long run.[273] The implementation of new technology is expensive, but expense should not inhibit or delay technological advancement. The benefits of slowing global climate change outweigh the initial investment if Louisiana is dedicated to making an environmental impact with solar energy.

The committee collected data from other states but only listed the federal lack of interest in a mandatory renewable energy policy as a factor in its decision.[274] Although a federally mandated RPS does not exist at this time, the majority of states in the nation have implemented an RPS, which leaves Louisiana in the minority.[275] The LPSC should place more weight on the national trend as exemplified by the majority of states, instead of the federal government, and implement an RPS for the state.

4. Tradable Renewable Energy Credits

In conjunction with the RPS, the new solar incentive structure needs to contain a tradable credit program similar to that of Massachusetts.[276] A tradable credit program rewards solar energy producers with credit that utility companies need to solicit to comply with the state's RPS. The utility companies would purchase the tradable credit from the producers, incentivizing more ratepayers to install and produce solar energy. The credit program would not require any additional funding from the state, except for staffing positions to regulate that portion of the incentive program. To avoid some of the pitfalls common to haphazardly implemented programs,

269. *Id.*
270. *Id.*
271. *Id.*
272. *Id.*
273. *Clean Power Green Jobs Fact Sheet*, *supra* note 202.
274. Docket No. R-28271, *supra* note 268.
275. *Renewable Portfolio Standard Policies*, *supra* note 34.
276. *See generally* discussion *supra* Part III.C.

Louisiana can implement a price floor for the value of the credit that phased out over time, ensuring consistent demand for the credit over that period of time.[277] The tradable credit would stimulate growth by providing an additional incentive for consumers to generate solar power while keeping governmental expense to a minimum.[278]

5. Administration

The legislature should designate the LPSC as the governing body for each of these programs. The regulation falls squarely within the constitutional jurisdiction of the LPSC to "regulate all common carriers and public utilities and have such other regulatory authority as provided by law. . . ."[279] With the LPSC already empowered with the ability to regulate utility companies, it has the infrastructure and expertise necessary to manage these incentive programs. California has demonstrated that Public Service Commissions can administer and regulate tradable credit programs.[280]

The proposed new incentive policy will provide many attractive incentives while keeping additional strain on the state budget to a minimum by merging state and consumer funding. Louisiana needs this incentive and regulatory policy plan to increase demand for solar panels and decrease greenhouse gas emissions. The slightly lowered tax credit, now funded by additional money from consumers, will serve to diminish the initial barriers to entry. The higher net metering caps and structured interconnection standards will ensure solar producers can connect to the grid easily and lower energy bills—incentivizing them to keep their panels. The RPS and corresponding tradable credits will ensure that utility companies in Louisiana comply with the demand for increased solar energy and communicate to the nation that Louisiana is serious about its commitment to combatting global climate change and providing support for solar investment in the state.

CONCLUSION

Global climate change is an imminent threat.[281] There are many ways to combat it, but one of the most popular and effective methods is by targeting

277. Grossman, *supra* note 192.
278. *See Solar Power Performance Payments*, *supra* note 182.
279. LA. CONST. art. IV, § 21.
280. *See RPS Compliance Rules and Process*, *supra* note 150.
281. Baker-Bransletter, *supra* note 2, at 4; *see also* HARRIS ET AL., *supra* note 2, at 3.

energy sources that produce greenhouse gases.[282] By increasing solar panel utilization and decreasing reliance on traditional methods of energy production, fewer greenhouse gases are emitted, less air and water pollution emanate into the environment, and economic benefits are realized in industry production and jobs.[283] Louisiana incentivized solar panel installation with its Solar Energy Tax Credit but failed to plan adequately for the high demand; consequently, the program came to a screeching halt.[284] Now, in the face of a no-solar-incentive policy and increased interest created by the tax credit, Louisiana needs to adopt a new comprehensive solar incentive and regulatory policy. The Louisiana Legislature may keep the income tax credit, but it needs to reduce credit while developing a means for funding. Rules on net metering and interconnection standards should be relaxed, and a statewide RPS with tradable tax credits needs to be implemented to ensure longevity of solar adoption. Louisiana showed commitment to combatting global climate change with renewable energy when it implemented the tax credit and net metering. Now is the time to take the next step to ensure solar panels stay planted in Louisiana, collecting the sun's energy and letting Louisiana shine as a solar energy leader.

Michael Seibert[*]

282. RENEWABLE ENERGY ASSESSMENT, *supra* note 12, at 4; *see also Sources of Greenhouse Gas Emissions*, *supra* note 12.

283. Keith et al., *supra* note 41.

284. Larino, *supra* note 86.

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