



Special Legislative Commission to Study and make
Recommendations for the Placement of Solar Panels
on Inter-State Highways

Final Report

Submitted April 1, 2024

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Commission Members

- Representative Robert D. Phillips, Chair – D - District 51 - Woonsocket, Cumberland
- Representative Matthew S. Dawson, Vice Chair – D - District 65 - East Providence
- Representative David Morales, – D - District 7 - Providence
- Mr. Robert Rocchio, Rhode Island Department of Transportation
- Mr. James Wilusz, Rhode Island Department of Environmental Management
- Mr. Todd Bianco, Rhode Island Public Utilities Commission
- Ms. Shauna Beland, Rhode Island Office of Energy Resources

Dear Speaker Shekarchi:

I am pleased to provide you with the findings and recommendations of the Special Legislative Commission to Study and make Recommendations for the Placement of Solar Panels on Inter-State Highways (the "*Commission*").

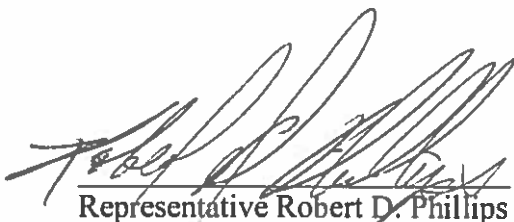
This seven (7) member Commission was convened to study and provide recommendations for the most appropriate placement of solar panels on median strips on interstate highways and route 146, carports at state parking lots, and such other locations which would provide and generate maximum returns on the investment as well as producing substantial amounts of energy.

Accordingly, the Commission heard related testimony, and studied written testimony, from the following sources that provided various perspectives regarding the aforementioned issue: the Rhode Island Department of Transportation, the Rhode Island Department of Environmental Management, the Rhode Island Public Utilities Council, the Rhode Island Office of Energy Resources, Rhode Island Energy, the International Brotherhood of Electrical Workers, and Legal Counsel for the Rhode Island House of Representatives.

This final report is a culmination of six (6) hearings that began in September, 2023 and ended in February, 2024. It contains information presented by various witnesses who testified before the Commission, as well as presentations made, which the Commission has studied.

I would like to express my gratitude to all members of the Commission for their willingness to take part in these discussions and we appreciate the investment of the time and talent that they graciously provided.

Sincerely,



Representative Robert D. Phillips
Chair

Commission Findings

The Commission studied the placement of solar panels on appropriate state-owned property and other such appropriate places and, based on testimony and material presented to it, and discussions by and amongst its members, the Commission finds as follows:

1. The 2021 Act on Climate (Rhode Island General Law §42-6.2-9) **legally mandates** that Rhode Island reach net-zero emissions by 2050.
2. Expanding renewable energy infrastructure on the undeveloped areas on highway medians and off ramps ("**interstate rights of way**"), which are unsuited for many other types of development, would contribute to reaching Rhode Island's legally mandated emissions goal.
3. Placing solar panels on interstate rights of way would ensure that:
 - Solar panels are not surrounded by sunlight blocking structures;
 - Engineers will have easy access for the purposes of repairs and maintenance; and,
 - Interstate rights of way land areas, that are currently unusable for any other type of development, can now be utilized with a meaningful and impactful use.
4. According to Mr. Joseph Brennan, Esq., Legal Counsel for the Rhode Island House of Representatives:
 - A state's Utility Accommodation Policy ("**UAP**") prescribes policies and procedures for accommodating utility facilities on interstate rights of way;
 - Rhode Island's UAP utilizes the federal definition of "utility facility", which allows for a renewable energy, such as solar energy, to be considered as a utility facility;
 - The use of interstate rights of way to accommodate utilities is considered in the public interest as long as it complies with federal laws, federal regulations, state law, and a state's UAP;
 - In order for Rhode Island to move forward, the Rhode Island Department of Transportation ("**DOT**") would have to amend Rhode Island's UAP to outline procedures, criteria, and standards it uses to evaluate and approve individual applications for utility facilities within the interstate rights of way; and,
 - In the event that amendment to the UAP is pursued, and the UAP is subsequently amended:
 - The Federal Highway Administration Division Offices would then review and approve the amended UAP for compliance with federal requirements;

Commission Findings (continued)

- DOT would then subsequently enter into written arrangements setting forth the terms for a particular project; and,
 - Upon the event of successful amendment, as described above, the DOT can approve a utility project installation in accordance with the amended UAP without any referral to the Federal Highway Administration.
5. According to Robert Rocchio of the DOT:
- DOT has identified sites totaling over two hundred (200) acres on interstate rights of way that are viable locations for solar development;
 - In general, these sites would take approximately one (1) year to construct;
 - Many factors affect the timeline to complete renewable energy projects and are most often delayed due to physical attributes of the selected site;
 - In general, it takes approximately four (4) miles of highway medians, or three (3) acres, to generate one (1) megawatt (MW) of power; and,
 - Other states, including Massachusetts, that have placed solar panels on interstate rights of way have used lease agreements such as Power-Purchase Agreements or Interconnection Service Agreements (“ISA”), which are contracts executed between the customer and the electric distribution utility.
6. According to James Wilusz and Ronald Gagnon of the Rhode Island Department of Environmental Management (“DEM”), DEM:
- Regulates wetlands and vegetation buffer zones, which include some highway median areas;
 - Has developed guidelines for the installation of ground mounted solar arrays on sites within their jurisdiction; and,
 - Offers and encourages pre-application meetings to coordinate large projects that involve multiple permits, such as solar projects on interstate rights of way, in order to decrease the time needed to process applications.
7. According to Karen Bradbury and Shauna Beland of the Rhode Island Office of Energy Resources (“OER”), which submits applications for clean energy grants and performs post award planning:
- Solar developments on interstate rights of way has been used in other states, including Massachusetts;
 - In 2019, OER invited solar companies to bid for solar projects to help offset Rhode Island’s electricity loads;
 - Rhode Island currently has virtual net metering contracts that offset 78% of the current electricity load; and,

Commission Findings (continued)

- OER considers that the cost and time for interconnection is likely one of the most pressing challenges to successful implementation of solar panels on interstate rights of way.
8. According to Todd Bianco of the Rhode Island Public Utilities Commission (“*PUC*”), a quasi-judicial administrative agency that regulates facilities that distribute significant amounts of electrical energy and regulates the price charged for electrical energy in Rhode Island:
- Expanding or upgrading the electrical grid system to allow interconnection is very expensive in some locations in Rhode Island;
 - Solar facilities on interstate rights of way would be eligible to participate in a number of programs that are designed to increase the supply of clean energy in Rhode Island;
 - There are multiple viable models to use interstate rights of way to host solar facilities that can create positive revenue sources; and,
 - PUC concurs with the OER that the cost and time for interconnection is likely one of the most pressing challenges to successful implementation of solar panels on interstate rights of way.
9. According to Joe Walsh of the International Brotherhood of Electrical Workers Local 99 (IBEW-99):
- In Rhode Island, there are one-hundred and seventy-five (175) members who are working on, or have experience with, solar panel installation;
 - Approximately eighty percent (80%) of IBEW-99 members have experience with larger solar farm installations and a lesser percent have experience with solar panels on rooftops;
 - Solar panel developments are classified as electric work and, therefore, under federal law, are subject to prevailing wage legislation;
 - Additional renewable energy projects will offset the risk of loss of federal funding for renewable energy projects and increase the number of opportunities for existing and future electricians in Rhode Island; and,
 - Mr. Walsh opined that the construction of solar panels on interstate rights of way on a large scale would not be delayed or hindered by a lack of skilled Rhode Island laborers.
10. According to Erica Russell Salk and Nicholas Ucci of Rhode Island Energy on the scope of current interconnection and the application and approval process:
- The total amount of megawatts (MWs) interconnected as of December, 2023 is 616 MW and that figure is expected to rise to 700 by the end of 2024;

Commission Findings (continued)

- 135 MW were generated from systems under 25 kilowatts (kW) (generally rooftop solar panels), and 481 MW from systems over 25 kW (generally solar sites);
- There are projects totaling 573 MW in the queue, and total applications as of December, 2023 stands at 22,637;
- In 2023, the federal government selected Rhode Island Energy to be a recipient of financial support for advanced reclosers, smart capacitors and regulators, digital relays, and fiber communications, along with other grid modernization software;
- The application process includes a pre-application (required for interconnections 250 kW and greater), an optional feasibility study, and a required engineering review;
- The engineering review determines adverse impacts and identifies the scope of work and cost associated with the interconnection;
- Preauthorization requires the execution of an ISA between the customer and utility that identifies the terms and conditions, timeline, scope of work, and payment schedules; and,
- After the system becomes operational, all systems that are at least 25 kW are registered with Independent System Operator-New England, which is a process that takes approximately one (1) year.

Commission Recommendations

Based on its study of the placement of solar panels on appropriate state-owned property, as well as related testimony and material presented to it, and discussions by and amongst its members, the Commission makes the following recommendations:

1. The General Assembly may consider enacting legislation that would:
 - a. Acknowledge the many advantages of utilizing interstate rights of way for renewable energy projects and that Rhode Island shall make every effort to support the development of such projects; and,
 - b. Create a technical review committee comprised of representatives from the DOT, the DEM, the PUC, Rhode Island Energy, and other relevant stakeholders for the purpose of coordinating interstate rights of way development proposals to maximize efficiency and coordination, and minimize delay and cost.
2. The DOT should be allowed to take any and all action necessary to streamline federal approval for solar development proposals on interstate rights of way, including any amendments necessary to Rhode Island's UAP.
3. Continue existing programs to facilitate and encourage the development of solar renewable energy projects on state properties, rooftops, and carports.
4. OER and Rhode Island Energy should be encouraged to continue to pursue federal grant opportunities for Rhode Island's renewable energy infrastructure.

Appendix A - Enabling Resolutions

2022 -- H 8375

2023 -- H 6370

(See attached)

2022 – H 8375

LC006188

STATE OF RHODE ISLAND

IN GENERAL ASSEMBLY

JANUARY SESSION, A.D. 2022

HOUSE RESOLUTION

CREATING A SPECIAL LEGISLATIVE COMMISSION TO STUDY AND MAKE
RECOMMENDATIONS FOR THE PLACEMENT OF SOLAR PANELS ON INTER-STATE
HIGHWAYS

Introduced By: Representatives Phillips, Corvese, Blazejewski, and Fogarty

Date Introduced: June 24, 2022

Referred To: House read and passed

1 WHEREAS, Solar energy utilization in highway infrastructure around the country has
2 been increasing in recent years due in part to several advantages for this type of energy
3 development including the use of existing electrical infrastructure already aligned with major
4 highways, secured boundaries, and easy maintenance access; now, therefore be it

5 RESOLVED, That a special legislative commission be and the same is hereby created
6 consisting of seven (7) members; three (3) of whom shall be members of the House of
7 Representatives, to be appointed by the Speaker of the House; one of whom shall be the Director
8 of the Department of Transportation, or designee; one of whom shall be the Director of the
9 Department of Environmental Management, or designee; one of whom shall be the Chairperson
10 of the Public Utilities Commission, or designee; and one of whom shall be the Director of the
11 Office of Energy Resources, or designee.

12 In lieu of any appointment of a member of the legislature to a legislative study
13 commission created by a General Assembly resolution, the appointing authority may appoint a
14 member of the general public to serve in lieu of a legislator; provided that, the majority leader or
15 the minority leader of the political party which is entitled to the appointment consent to the
16 member of the general public.

17 The purpose of said commission shall be to study and provide recommendations for the
18 most appropriate placement of solar panels on median strips on interstate highways and route
19 146, carports at state parking lots, and such other locations as the commission determines. The

1 commission shall seek placements which would provide and generate maximum returns on the
2 investment as well as producing substantial amounts of energy.

3 Forthwith upon passage of this resolution, the members of the commission shall meet at
4 the call of the Speaker of the House and organize and shall select, from among the legislators, a
5 chairperson.

6 Vacancies in said commission shall be filled in like manner as the original appointment.

7 The membership of said commission shall receive no compensation for their services.

8 All departments and agencies of the state shall furnish such advice and information,
9 documentary and otherwise, to said commission and its agents as is deemed necessary or
10 desirable by the commission to facilitate the purposes of this resolution.

11 The Speaker of the House is hereby authorized and directed to provide suitable quarters
12 for said commission; and be it further

13 RESOLVED, That the commission shall report its findings and recommendations to the
14 House of Representatives on or before April 11, 2023, and said commission shall expire on July
15 11, 2023.

LC006188

2023 -- H 6370

LC002831

STATE OF RHODE ISLAND

IN GENERAL ASSEMBLY

JANUARY SESSION, A.D. 2023

HOUSE RESOLUTION

EXTENDING THE REPORTING AND EXPIRATION DATES FOR THE SPECIAL
LEGISLATIVE COMMISSION TO STUDY AND MAKE RECOMMENDATIONS FOR THE
PLACEMENT OF SOLAR PANELS ON INTER-STATE HIGHWAYS

Introduced By: Representative Robert D. Phillips

Date Introduced: May 05, 2023

Referred To: House Corporations

1 RESOLVED, That the special house commission created by resolution No. 411 passed by
2 the House of Representatives at its January session, A.D. 2022, and approved June 24, 2022,
3 entitled "HOUSE RESOLUTION CREATING A SPECIAL LEGISLATIVE COMMISSION TO
4 STUDY AND MAKE RECOMMENDATIONS FOR THE PLACEMENT OF SOLAR PANELS
5 ON INTER-STATE HIGHWAYS" is hereby authorized to continue its study and make a report
6 to the House of Representatives on or before April 11, 2024, and said commission shall expire on
7 June 11, 2024; and be it further

8 RESOLVED, That the time for reporting authorized by resolution No. 411 passed by the
9 House of Representatives at its January session, A.D. 2022, and approved June 24, 2022, be and
10 the same is hereby rescinded.

LC002831

EXPLANATION
BY THE LEGISLATIVE COUNCIL
OF

HOUSE RESOLUTION

EXTENDING THE REPORTING AND EXPIRATION DATES FOR THE SPECIAL
LEGISLATIVE COMMISSION TO STUDY AND MAKE RECOMMENDATIONS FOR THE
PLACEMENT OF SOLAR PANELS ON INTER-STATE HIGHWAYS

- 1 This resolution would extend the reporting and expiration dates of the commission to
- 2 study and make recommendations on placement of solar panels on inter-state highways from
- 3 April 11, 2023, to April 11, 2024, and would expire on June 11, 2024.

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LC002831
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Appendix B - Meeting Agendas

- **September 13, 2023**
 - Agenda (See attached)
- **October 4, 2023**
 - Agenda (See attached)
- **November 1, 2023**
 - Agenda (See attached)
- **December 6, 2023**
 - Agenda (See attached)
- **January 29, 2024**
 - Agenda (See attached)
- **February 12, 2024**
 - Agenda (See attached)

**Special Legislative Commission to Study and make Recommendations for the
Placement of Solar Panels on Inter-State Highways**

NOTICE OF MEETING

DATE: Wednesday September 13, 2023

TIME: 4:00 PM

PLACE: Room 101

AGENDA:

- I. Call Meeting to Order
- II. Election of Chairperson
- III. Discussion of Resolution
- IV. Discussion and Commissioner Input on Future Presentations
- V. Next meeting date
- VI. Adjournment

No Public Testimony will be accepted at this meeting.

If you have any questions please contact Derrik Trombley, dtrombley@rilegislature.gov, 401-222-1258.

ACCOMMODATIONS

The General Assembly strives to make the legislative process accessible to all. Anyone needing an accommodation to attend or testify at a legislative hearing, please contact Stacy Custer at scuster@rilegislature.gov or 401-222-7904, at least 48 hours in advance of the scheduled meeting.

TELEVISION AND LIVESTREAM INFORMATION

The meeting will be televised on Capitol Television on: Cox Communications, channels 15 and 61, and in high definition on Cox Channel 1061; on i3 Broadband (formerly Full Channel) on channel 15; and on Verizon, channel 34.

It will also be live streamed at <https://www.rilegislature.gov/CapTV/Pages/default.aspx>

**Special Legislative Commission to Study and make Recommendations for the
Placement of Solar Panels on Inter-State Highways**

NOTICE OF MEETING

DATE: Wednesday October 4, 2023

TIME: 4:00 PM

PLACE: Room 101

AGENDA:

- I. Call Meeting to Order
- II. Election of a Vice-Chairperson
- III. Presentation
 - a. Joseph Brennan, Esq. Rhode Island State House Legislative Council
 - b. Robert Rocchio, Rhode Island Department of Transportation.
- IV. Next meeting date
- V. Adjournment

No Public Testimony will be accepted at this meeting.

COMMISSION INFORMATION

For information on commissions, **CLICK HERE.**

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**Special Legislative Commission to Study and make Recommendations for the
Placement of Solar Panels on Inter-State Highways**

NOTICE OF MEETING

DATE: Wednesday November 1, 2023

TIME: 4:00 PM

PLACE: Room 101

AGENDA:

- I. Call Meeting to Order
- II. Presentations
 - a. Ronald Gagnon, Administrator, Office of Customer and Technical Assistance, Rhode Island Department of Environmental Management.
 - b. Shauna Beland, Director of Energy Programs and Policy, Office of Energy Resources.
 - c. Karen Bradbury, Administrator, Energy Legislation and Programs, Office of Energy Resources.
 - d. Todd Bianco, Rhode Island Public Utilities Commission.
- III. Public Testimony
- IV. Next meeting date
- V. Adjournment

Public Testimony will be accepted at this meeting.

COMMISSION INFORMATION

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PUBLIC TESTIMONY

In-person and written testimony will be accepted by the Commission.

Please email written testimony to Derrick Trombley at dtrombley@rilegislature.gov and indicate your name and organization (when applicable). It is recommended to send written testimony in PDF format. Written testimony will be: distributed to Commission members, posted to the General Assembly website, and may be accessible via internet search engines. Written testimony received twenty-four (24) hours in advance of the Commission meeting will be distributed to Commission members at that meeting.

**Special Legislative Commission to Study and make Recommendations for the
Placement of Solar Panels on Inter-State Highways**

NOTICE OF MEETING

DATE: Wednesday December 6, 2023

TIME: 4:00 PM

PLACE: Room 101

AGENDA:

- I. Call Meeting to Order
- II. Presentations
 - a. Erica Russell Salk, Manager, Customer Energy Integration, Rhode Island Energy
 - b. Nicholas Ucci, Director of Government Affairs, Rhode Island Energy
 - c. Joe Walsh, Business Manager, International Brotherhood of Electrical Workers Local 99.
- III. Public Testimony
- IV. Next meeting date
- V. Adjournment

Public Testimony will be accepted at this meeting.

COMMISSION INFORMATION

For information on commissions, **CLICK HERE.**

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ACCOMMODATIONS

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PUBLIC TESTIMONY

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**Special Legislative Commission to Study and make Recommendations for the
Placement of Solar Panels on Inter-State Highways**

NOTICE OF MEETING

DATE: Monday January 29, 2024

TIME: 4:00 PM

PLACE: Room 101

AGENDA:

- I. Call Meeting to Order
- II. Discussion on Potential Findings and Recommendations
- III. Adjournment

No Public Testimony will be accepted at this meeting.

COMMISSION INFORMATION

For information on commissions, **CLICK HERE.**

If you have any questions, please contact Derrik Trombley at dtrombley@rilegislature.gov or 401-222-1258.

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**Special Legislative Commission to Study and make Recommendations for the
Placement of Solar Panels on Inter-State Highways**

NOTICE OF MEETING

DATE: Monday February 12, 2024

TIME: 3:30 PM

PLACE: Room 101 – State House

AGENDA:

- I. Call Meeting to Order
- II. Discussion and Review of Draft Commission Report
- III. Adjournment

No Public Testimony will be accepted at this meeting.

COMMISSION INFORMATION

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Livestreaming is available at <https://capitolvri.cablecast.tv>.

Appendix C - Written Testimony, Material, and Presentations

**(These documents have been posted in the “Solar Panel Commission” section of the Commissions tab of the State of Rhode Island General Assembly website:
<https://www.rilegislature.gov>)**

1. 12-6-2023---IBEW-99 Handout
2. 12-6-2023---Rhode Island Energy Presentation
3. 11-1-2023---2023 Amendments Renewable Energy and Net Metering
4. 11-1-2023---Office of Energy Resources Presentation
5. 11-1-2023---Remote Generation Programs Revenue Framework
6. 11-1-2023---RIDEM Presentation
7. 11-1-2023---RIDOT Further Site Evaluation
8. 10-4-2023---Renewable Energy Right of Way Guide
9. 10-4-2023---RIDOT Additional Potential Solar Sites Memo
10. 10-4-2023---RIDOT Potential Solar Sites Memo
11. 10-4-2023---RIDOT Solar Panel Presentation
12. 10-4-2023---RIDOT Solar Site Matrix Draft
13. 10-4-2023---Roadside Renewables
14. 9-13-2023---23 CFR 645.207
15. 9-13-2023---290-RICR-20-00-5
16. 9-13-2023---2023--H-6370
17. 9-13-2023---2022--H-8375