Interfaith Power & Light (IPL) has completed its second survey of congregations in the United States with solar Photovoltaic (PV) systems. The number of congregations reporting has more than doubled since the last survey to 770 in 47 states plus the District of Columbia. The total PV capacity of these systems is 45 megawatts (MW), comparable to the on-site solar capacity of large multi-location commercial entities such as Costco and Kohls. This report describes how IPL conducted the survey and provides a state-by-state summary of findings.

In summary, California is by far the state with the greatest number of congregations (of all major faith traditions) to implement solar PV systems; the PV systems installed by 190 Congregations provide 13.5 MW of capacity. This is sufficient energy to power 2500 homes or the carbon-reduction equivalent of planting 235,000 trees. Other regions with large numbers of congregations that have converted to solar energy include: Massachusetts (64 congregations), Washington D.C. (55), Indiana (48), Maryland (27) and Minnesota (27). Three states with no congregation found utilizing solar power are Alaska, Mississippi and Wyoming.

APPROACH

IPL’s first survey of congregational PV systems was conducted in 2016. This 2019 survey was designed not only to identify congregations as did the first survey, but also to add capacity data and information source(s). We estimate previously installed capacity is 20-25 MW. This
expanded database (from which this summary is extracted) will form a firmer foundation for future updates.

A variety of sources were used in the 2019 survey. These included:

1. The prior 2016 survey with approximately 350 congregations identified by name, state and city, but without capacity information.
2. A survey of approximately 12,000 individuals affiliated with congregations on IPL’s mailing list, asking them to respond with congregation name, location and capacity if they knew any congregations with PV systems. Approximately 275 persons replied to this survey with full or partial information.
3. Request to IPL affiliates in states with higher concentrations of PV congregations. While most states responded with local insights, Washington D.C. and Massachusetts were exceptionally well represented.
4. Correspondence with the United Church of Christ (UCC) national staff who had previously compiled their own list of 88 congregations with PV systems and the San Diego Diocese who had their own list of installed PV systems.
5. A search of websites of financing firms, such as Collective Sun and California Clean Energy, which we knew work with congregations. If we identified a strong local installer, a search of their website for examples of congregational systems they installed was included.
6. A keyword search on Google using key words such as “state name”, “church” and “solar”. Google searches were also conducted on specific church names when we identified a name, but not capacity data. These searches often provided a beneficial link to other congregations in a community, faith tradition, or state with PV systems that we had not previously identified.
7. Telephone calls or emails to congregations we identified, but where capacity information was lacking. This personal approach was usually reserved for congregations who appeared to have unusually large systems, or congregations in states with very few systems.
8. Correspondence with the New York Solar Energy Industries Association, as we remain concerned that our tally for New York state appears too low.
9. Estimates of capacity if none was reported using reported numbers of panels installed and date (the average panel capacity has been increasing over time), or posted photos.

The tabulation does not include all congregations that have acted to reduce the environmental impact of their energy supply. In addition to the congregations tallied, some congregations obtain energy through community solar (also known as community shared solar or solar garden) projects. Others purchase “Green Energy” when available through their utility, or have installed solar heating systems. Even more have made energy efficiency upgrades to reduce consumption. None of these have been included in this tally.

**GENERAL FINDINGS**

As summarized above, we have identified 770 congregations with a combined PV capacity of 45 megawatts. We believe the sharp increase (more than doubling) from the prior survey is due to
two major factors. The first is the commitment of members of the faith community across the religious and geographic spectrum to address climate change. Several Protestant denominations have endorsed responses to climate change at the national level, which is reflected at the local level by the number of churches with solar PV systems. For example, UCC and Unitarian Universalists churches appear frequently in the tally. Many Catholic congregations have embraced the Pope’s *Laudato Si* encyclical individually and collectively at the diocese level – the San Diego Diocese has installed more solar capacity (5.3 MW) on its churches and schools than any state except the (balance of) California. Jewish synagogues are well represented, responding to their calling of “Tikkun Olam;” repairing the world.

The second major factor is the increased affordability of solar PV systems and their increasingly favorable economics. The steadily declining cost of panels for PV systems has certainly helped. This advantage has been augmented by a proliferation of financing alternatives. In the recent past, churches, synagogues and mosques would view a PV investment as a fund-raising challenge, meaning contributions from congregants would need to be raised to fund these systems. But the expansion of Property-Assessed Clean Energy (PACE) financing, Power Purchase Agreements (PPAs), and leases has allowed congregations to finance PV systems over 10 or 20 years with payments that in some states are less than their current (and forecast) electric utility charges. Finance firms have been able to raise capital for these projects from socially responsible investors who are able to utilize the tax benefits that the non-profit congregations cannot. The savings realized by the congregations then free up more funds for their missions.

**CONCLUSION**

The dramatic increase of solar on congregations is a testament to the growing commitment of faith communities to address the climate challenge. It also demonstrates the attractiveness of on-site solar as a practical solution that allows a congregation to practice what it preaches. Finally, the visibility of rooftop solar is a way for houses of worship to broadcast their values of Creation care to the community – tapping into clean, renewable “energy from heaven” to power their work in the world.