



  
**EQUITY IN A  
CLEAN ENERGY  
ECONOMY**

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**Moving from Conflict to Compromise:  
A case study in collaborative low-income  
renewable program design**

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## EXECUTIVE SUMMARY

DEFG has launched a nation-wide collaborative titled, “Equity in a Clean Energy Economy (ECEE).” The collaborative seeks to bring together different stakeholders to identify new approaches and tools to address equity issues for at-risk communities during the transition to a clean economy. There are six tracks of work planned under this collaborative, and this case study was commissioned to support and inform several of these tracks of work. (See appendix #1)

In this paper, the author describes the efforts, false starts, and ultimately successful process taken by a major U.S. electric utility company, DTE Energy, and over a dozen local, regional, and national stakeholder and advocacy groups to design three renewable programs which target low-income customers. Through an analysis of the various positions and the issues which were most difficult to resolve, the author has identified 10 fundamental design questions that should be addressed early in the program design process. Ideally, addressing these questions would be done in a collaborative manner and would include representatives of the stakeholders most invested in the success of the program – especially the low-income customers for whom the program is being designed to serve.

This case study is organized into five sections:

- Sections 1, 2, and 3 describe three cycles of proposals, feedback, efforts to collaborate, and outcomes.
  - Section 1 details DTE’s initial proposal that was included in a general rates regulatory filing, which was unsupported by all intervenors in the case for multiple reasons and was ultimately rejected by the Michigan Public Service Commission.
  - Section 2 describes the Company’s second round of proposals, included within a Renewable Plan regulatory filing, following inconclusive collaborative discussions with stakeholders. While better received, multiple concerns were still raised about these proposals as the case was litigated.
  - Section 3 summarizes the final outcome reached only after intense negotiations and very significant effort and perseverance of the parties. These negotiations resulted in a settlement agreement which was approved by the Michigan Public Service Commission.
- Section 4 explores how the third effort was successful in establishing new renewable programs that are solely targeted at low-income customers. In this section, the author also proposes a method for designing, comparing, and contrasting various programs through a set of 10 fundamental design questions.
- Section 5 outlines how the lessons learned, outcomes, and fundamental design questions could be applied in the ongoing work of the Equity in a Clean Energy Economy collaborative.

The new programs described in Section 3 are innovative and offer an opportunity to test out different program designs and tactics. The author recommends that the Equity in a Clean Energy Economy collaborative and its members follow and learn as these programs are implemented, and also utilize and test the 10 fundamental design questions presented in this paper.

While there are bound to be additional challenges to overcome, the author is very encouraged by the support and momentum behind DTE’s new programs and the opportunity to better address the needs and renewable goals of DTE’s low-income customers and, through this paper and the Equity in a Clean Energy Economy collaborative, to better serve low-income customers across the country.

## SECTION #1: DTE’S INITIAL LOW-INCOME RENEWABLE PROPOSAL (July 2019)

### Regulatory context

DTE Energy has offered one or more voluntary renewable programs since 2007, before the first renewable portfolio standard was established in Michigan in 2008<sup>1</sup>. Their first voluntary renewable program, GreenCurrents, included purchasing renewable energy certificates<sup>2</sup>, or RECS, from existing renewable energy systems on behalf of program subscribers. An additional voluntary program, MIGreenPower™, was approved on a pilot basis in October 2016 and was sourced from new renewable projects built or expanded specifically to support this program. See Appendix #1 for a description of MIGreenPower™.

Shortly thereafter, in December 2016, Michigan’s renewable energy laws were revised to increase the renewable portfolio standard and to require, for the first time, that utilities offer voluntary renewable programs for those customers who wished to attribute more of their energy usage to renewable energy<sup>3</sup>. After a series of filings, reviews, and some program modifications and additions, DTE’s MIGreenPower™ program was approved in early 2019 by the Michigan Public Service Commission (MPSC) as compliant with the new legislated requirement on voluntary renewable programs.

### DTE initially proposed enrolling low-income customers into MIGreenPower™ at no additional cost

DTE’s MIGreenPower™ program has proven to be popular with many customers, growing to one of the country’s largest voluntary renewable programs (as measured by contracted volume). There have, however, been concerns raised over the years by groups who participated in DTE’s regulatory proceedings that the program was too expensive for low-income customers to participate. These stakeholders – primarily environmental groups and solar advocates speaking on behalf of low-income customers – suggested that DTE should do more to enable low-income customers to access renewable energy.

In response to those concerns, DTE Energy filed a general rate case in July of 2019 that included a proposal for a low-income renewable pilot (MPSC Case U-20561). This pilot program would offer participation in MIGreenPower™ to 2,500 qualifying low-income customers at no additional cost. As proposed by DTE, participants in this pilot would:

- Be enrolled on a first-come, first-served basis
- Be enrolled at no additional cost

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<sup>1</sup> Michigan passed legislation in 2008 to establish a Renewable Portfolio Standard requirement for electricity providers, requiring that at least 10% of the electricity used to serve Michigan customers be from renewable energy sources by 2015.

<sup>2</sup> Renewable Energy Certificates are created when one megawatt hour of electricity is produced using renewable resources. These certificates can be sold separately from the electricity that is produced to purchasers who want to offset their carbon footprint and/or to companies who utilize the certificate to demonstrate and comply with renewable energy requirements.

<sup>3</sup> In December 2016, Michigan’s Renewable Portfolio Standard was increased to 15% by 2021.

- Participants would be charged the MIGreenPower™ subscription fee and receive the associated bill credits in the same manner as all other MIGreenPower™ subscribers
- When the subscription fee and bills credits are netted together, the remaining amount represents the standard net price premium for subscribing to MIGreenPower™
- Low-income participants in the pilot would, however, also receive an additional bill credit that would offset the net price premium for participating in the MIGreenPower™ program. The bill credit would be funded by all other DTE customers through their basic electricity rates.
- Thus, participation would be at no additional cost to the customer but would not reduce monthly electricity bills
- Receive 50% renewable power (50% renewables coming from a 35% participation level in MIGreenPower™ plus the base level of 15% renewables provided to all DTE customers through renewable portfolio standard compliance)
- Have RECs (renewable energy certificates) from their subscription in MIGreenPower™ retired on their behalf. These RECs would not count toward DTE's renewable portfolio standard requirements.
- Participate in the existing MIGreenPower™ voluntary renewable program. No new renewable resources were to be added to the MIGreenPower™ program to support this pilot initially
- Need to meet certain eligibility criteria:
  - At or below 200% of federal poverty level (total population in DTE service territory = 240,000)
  - Not enrolled in other low-income programs
  - Are less than \$100 in arrears
  - Total eligible customers given these criteria = ~56,000

DTE's stated objectives of the proposed low-income renewable pilot program

- Provide increased renewable access to qualifying low-income customers
- Aid in development of additional low-income renewable programs by helping to
  - Gauge interest in voluntary renewable programs within the Company's low-income customer segment
  - Understand what motivates low-income customers to sign up and what obstacles, if any, remain which inhibit enrollment once the price premium is removed
  - Gather data to refine education and awareness activities
- Allow customers an opportunity to better understand the cost of renewable energy compared to their standard rate, as well as the value of the energy received in the marketplace for renewables
- Directly benefit low-income customers who wish to lower their carbon footprint

DTE requested approval of the program with funding of \$800,000, broken down as follows:

- Marketing expenses of \$250,000
  - Print materials and content development: \$100,000
  - Email/social media content development and customer targeting: \$10,000
  - Customer service training and enrollment costs: \$40,000
  - Community organization marketing: \$100,000

- Equivalent of \$100 per enrollee, although some expenses would be upfront costs meaning that cost per customer would drop if the program was expanded
- Information technology costs of \$300,000 to program the billing system. This investment would enable program expansion at minimal cost
- Funding of \$250,000 for the low-income credits which offset the net price premiums, or \$100 per customer

## No intervenors supported DTE’s initial proposed low-income pilot program

**Stakeholders:** Groups of stakeholders who participated in this regulatory case (i.e., intervenors) and who addressed this specific proposal included:

- Administration:
  - Michigan Public Service Commission Staff
  - Attorney General
- Advocacy groups primarily focused on the environment and associated impacts to consumers:
  - Environmental Law & Policy Center (ELPC, also representing the Solar Energy Industries Association, Vote Solar, and the Ecology Center)
  - Michigan Environmental Council (MEC, also representing the Natural Resources Defense Council, the Sierra Club, and the Citizens Utility Board of Michigan)
  - Soulardarity
- Advocacy groups primarily representing businesses:
  - Association of Businesses Advocating Tariff Equity (ABATE)
  - Great Lakes Renewable Energy Association (GLREA)

It should be noted that while all of these intervenors are interested in helping low-income customers, most people would not classify them as traditional or typical low-income customer advocacy groups. DTE has worked closely with many low-income customer advocacy groups on various assistance programs. However, traditional low-income customer advocacy groups have not often chosen to participate in DTE’s regulatory proceedings related to renewable energy.

**Stakeholder positions:** None of the intervenors in this regulatory case supported approval of DTE’s proposed low-income renewables pilot. They all advocated that the program be rejected and that DTE should work with MPSC Staff and stakeholders to design a better program. Arguments against the proposal can generally be summarized as follows:

- The proposal would not provide low-income customers a meaningful opportunity to access the benefits of renewable generation
  - Program would not actually lower bills for participants; does not reduce energy burden
  - The program was too small in terms of number of customers who will benefit
  - It would not create new renewable resources within low-income communities

- The proposed eligibility criteria were too narrow; those already enrolled in other low-income programs would be excluded, thus limiting the value of the data gathered and possibly providing a disincentive to participate
- The program capped renewable usage to 50%, between the combination of MIGreenPower™ and the renewable portfolio standard
- The proposed Marketing and IT costs appeared disproportionate to total costs
- The program would not create incremental new renewable resources; it lacked additionality

DTE's initial program was not approved; Directed to work with stakeholders on a new design

The Proposal for Decision that was issued by the Administrative Law Judge in this case recommended rejection of the pilot. The Administrative Law Judge recommended that DTE should work with Staff and other stakeholders to redesign a low-income renewables pilot that offers more tangible benefits to low-income customers. The Administrative Law Judge's cited the following reasons in support of these recommendations:

- The program did not provide for new renewable resources (e.g., additionality)
- The proposed eligibility criteria excluded too many low-income customers, negatively impacting value of the information gleaned
- The program would not lower customer bills
- Marketing costs were disproportionate to total costs

The Michigan Public Service Commission issued an order in this case on May 8, 2020. The order adopted the findings and recommendations of the Administrative Law Judge related to the proposed low-income renewables pilot and recommended that DTE work with other parties to develop a program that better reflects the renewable goals of low-income customers.

## SECTION #2: INITIAL ATTEMPTS AT COLLABORATIVE DESIGN (2020)

DTE began working with the Staff and other parties to address concerns regarding its low-income pilot program even before being directed to do so by the Michigan Public Service Commission's order in Case U-20561, which was issued in May 2020. While the conversations were initially focused on trying to settle that particular regulatory case, the collaboration on low-income renewable program design continued even after settlement discussions were abandoned. Ten meetings were held with stakeholders in the spring and summer of 2020. These collaborative discussions had not yet resulted in consensus regarding design principles for a low-income renewable program by August of 2020 when DTE filed a revised renewable plan.

### After inconclusive stakeholder discussions, DTE filed new low-income renewable program proposals

DTE Energy filed a revised renewable energy plan on August 31, 2020 (Case U-20713). This filing included a proposal specifically targeted at low-income customers which would leverage the company's existing MIGreenPower™ voluntary renewable program and be funded with donations. The filing also proposed a new offering that could provide a framework under which interested parties could develop low-income community solar projects. Finally, DTE's filing also described the ongoing but still incomplete collaborative discussions with the MPSC Staff and stakeholders to develop a low-income community solar pilot that would be specifically designed to address the renewable energy goals of low-income customers.

#### MIGreenPower™ Low-Income Donation Pilot

DTE proposed a revised low-income renewable pilot that it described as being enhanced by feedback on its prior proposal. Key differences from its prior proposal are that participants would receive bill credits to provide lower overall energy bills, the program would be funded through voluntary contributions, and the only eligibility requirement was income level. In this new proposal, participants would:

- Be invited to participate based on a random selection of eligible customers
- Receive average monthly bill savings of \$25 - \$30 a month based on average usage, as the normal MIGreenPower™ subscription fees would be fully offset by bill credits funded by voluntary contributions
- Receive 100% renewable power (100% renewables coming from 85% participation level in MIGreenPower™ plus the base level of 15% provided to all DTE customers through its renewable portfolio standard requirement)
- Have RECs (renewable energy certificates) from their MIGreenPower™ subscription retired on their behalf. These RECs would not count toward the Company's renewable portfolio standard requirements
- Participate in the existing MIGreenPower™ voluntary renewable program. No new resources were to be added to the MIGreenPower™ program to support this pilot initially
- Need to meet the sole eligibility requirement as being at or below 200% of federal poverty level

To fund the program, DTE would allow existing and new MIGreenPower™ customers to pay a monthly contribution. Later in the case but prior to settlement, DTE agreed to expand the donation pool to also

allow donations from any third party, such as government grants, non-profit foundations, businesses, community organizations, and individuals. The size of the program would depend on the amount of funding secured.

#### Customer-requested Project Offering as a framework for Community Solar

DTE's filing also described plans to develop locally sited solar projects based on specific requests from large industrial, commercial, or institutional and non-profit customers and based on their unique design criteria. The hallmark of this offering was to assist customers in reaching their own renewable energy goals by building according to their needs or the needs of their constituents. Customers participating in this offering would be required to subscribe to the full output of the project for the life of the project, and the RECs would be allocated to that customer or retired in that customer's name. Bill credits would be aligned with the MIGreenPower™ program. The participating customer could be an organization interested in allocating the RECs and bill credits that it received to its constituents, representing a possible framework for third parties to create low-income community solar projects without needing to directly contract for and manage the construction and operations of a solar array.

#### Low-income Community Solar

DTE's filing also stated that it was continuing to explore a future low-income renewable energy pilot that would develop solar projects in communities of need and allow residents to enroll. DTE cited its ongoing discussions with Staff and numerous stakeholders and stated that it planned to continue this collaboration to develop the pilot design and file for approval in a future regulatory filing.

### While better received, intervenors still had objections related to DTE's 2020 low-income renewable proposals

**Stakeholders:** Groups of stakeholders who participated in DTE's August 2020 renewable plan regulatory case (i.e., intervenors) and who addressed this specific proposal included:

- Administration:
  - Michigan Public Service Commission Staff
  - Attorney General
- Advocacy groups primarily representing consumers or the environment:
  - Environmental Law & Policy Center (ELPC, also representing the Vote Solar and the Ecology Center)
  - Michigan Environmental Council (MEC, also representing the Natural Resources Defense Council)
  - Soulardarity
  - City of Ann Arbor and Michigan Municipal Association for Utility Issues (MAUI)
- Advocacy groups primarily representing businesses:
  - Association of Businesses Advocating Tariff Equity (ABATE),

- Great Lakes Renewable Energy Association (GLREA)
- Michigan Energy Innovation Business Council (MEIBC, also representing the Institute for Energy Innovation and Advanced Energy Economy)

**Stakeholder positions:** Multiple stakeholders acknowledged improvements in DTE’s low-income proposals. Some supported approval of all or parts of these proposals, while still citing some concerns and offering additional improvement recommendations. Intervenors often argued that the proposals did not go far enough in increasing renewable access to low-income customers or in providing sufficient and sustainable bill savings. Concerns raised can generally be summarized as follows:

- Felt that the proposals did not fully meet the criteria outlined by the Administrative Law Judge in the prior case
  - The Administrative Law Judge recommended rejecting a previous proposal because it did not provide for new renewable resources, the eligibility criteria were too constrained, it did not provide customer bill savings, and that the estimated marketing costs were disproportionate to total costs
  - The Michigan Public Service Commission adopted this reasoning in its final order for U-20561 and rejected the prior proposal
- Deemed that funding for the donation pilot was very uncertain. Thus, customer benefits or bill savings would be too low or were uncertain. Some also objected to the level of the proposed bill credits, seeking to increase bill savings to mimic the benefits enjoyed by rooftop solar owners
- Objected to a lack of “additionality” since the donation pilot would leverage the existing MIGreenPower™ voluntary renewable program and would not immediately result in new renewable investments
- Believed that the size of the donation pilot and random method for enrolling eligible customers would limit the value of information regarding potential of a broader program
- Did not feel prudence could be sufficiently assessed because forecasts of marketing expenses were not provided
- Believed that DTE did not fully incorporate stakeholder input regarding community solar
- Encouraged DTE to do even more to engage low-income customers to better understand the priorities and values of communities who would participate in the program. One intervenor suggested creating an oversight and governance board to draft a proposal and provide ongoing oversight
- Objected to DTE’s exclusive ownership of the assets within the proposals (particularly if a project were sited behind a customer meter). Felt that alternative ownership models must be considered and competitive processes utilized

The Michigan Public Service Commission Staff recommended approval of DTE’s renewable plan, including its proposed low-income donation pilot. The Michigan Public Service Commission Staff also recommended developing a community solar program<sup>4</sup> and proposed regulatory elements that should be considered and next steps in developing such programs.

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<sup>4</sup> On October 5, 2018, in Case No. U-18351 and U-18352 the Michigan Public Service Commission ordered, “the Commission Staff shall engage with stakeholders in examining potential opportunities and barriers to third-party community energy

The Michigan Public Service Commission Staff testimony outlined three key regulatory elements to be considered when designing a community solar program included:

- Provides an option for customers to have access to renewable energy located in their community without having to build, own, and operate an on-site project
- Ensures that participating customers receive a community solar program credit amount that reflects all appropriate benefits from the community solar project
- Ensures that non-participating customers do not pay any costs associated with the community solar program if the adjusted cost of a community solar project is higher than a utility-scale solar project the utility would procure to serve all customers

Michigan Public Service Commission Staff recommended next steps for developing a community solar program included:

- Establish a community solar program rider with the energy and capacity portion of the community solar program credit based on the highest cost project selected from DTE's most recent request for proposals. The community solar program rider credit would be applicable to a community solar project for 20 – 25 years
- Conduct a thorough review and comparison between utility scale, transmission-connected solar and distribution connected community solar to appropriately account for the benefits and costs of the community solar project. Calculations for these benefits and costs may be approved by the Commission and included on the community solar program rider
- Organizations could identify a project and provide the project information to DTE
  - DTE would then review the project information and provide an estimate of the project cost in a levelized cost of energy (LCOE) format
  - Using the benefit and cost criteria established in the community solar program rider, DTE would calculate the program credit for the project in a \$ per kWh format
  - In the event the LCOE is higher than the program credit, DTE would determine the amount of “buy-down, up-front funding” needed to bring the cost of the project down enough so that non-participating customers are protected and will pay no more than the adjusted value of the solar if the requesting organization is unable to pay the full cost of the project in the future
  - To provide for low-income customer participation, these organizations may make special arrangements to fund low-income participation in their solar project
- DTE would own and operate the projects and issue an RFP for the design and construction
- DTE would manage subscriptions, charge the subscription fee, and provide the program credit on customer bills

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projects that could be integrated into utility planning and procurement processes.” This report summarizes the process Commission Staff took to engage stakeholders and provides the results of this engagement process.

[3CRE Report 717927 7.pdf \(michigan.gov\)](#)

## Synopsis of this case study to this point

In 2019, DTE proposed a low-income renewable program that no one liked. The parties attempted to collaborate on a new design outside of the litigated regulatory process but failed to come to consensus on the details prior to the deadline for DTE to file its next renewable plan update. So, within the company's August 2020 filing, the company made new proposals which were better received but still drew some criticism. The Michigan Public Service Commission Staff supported DTE's plans and also attempted to layout some principles and a process to develop an additional program (community solar), but there was not universal support for their proposals either. In early 2021, intervenors filed testimony on these topics, witnesses were questioned in a cross-examination hearing, and lawyers on all sides filed legal briefs arguing their respective positions.

## SECTION #3: THE PARTIES PROPOSE A SETTLEMENT (2021)

On April 14, 2021, a proposed settlement agreement was filed which would resolve all but one issue within DTE's renewable case filings from August 2020. All but one party either signed the settlement or chose not to contest the settlement.<sup>5</sup> The proposed settlement resolved and established three renewable programs which would target low-income customers, and which are described below.

### Low-income Donation Program

The parties agreed that DTE's proposal for a MIGreenPower™ Low-income Donation program met legal requirements and should be approved. Prior to the settlement, DTE had already agreed to accept donations from any individual or organizations to fund this pilot, rather than only accepting donations from other MIGreenPower™ subscribers. The settlement documented that modification.

### Customer-requested Offering, with a Low-income Option

The settlement stipulated that DTE will include a customer-requested offering within its voluntary renewable program, and that offering shall allow for an anchor-tenant pilot.

- The Anchor Tenant will be a "subscriber of last resort" who agrees to bear all costs and receive all benefits (including renewable energy certificates and credits) for the portions of the project for which there is not another participant during the life of the project
- Electricity output from the project could be subscribed to by other participants (through DTE), which would proportionately displace Anchor Tenant subscription costs and associated credits and renewable energy certificates for the amount of electricity subscribed. If a subscription terminates, the anchor tenant's responsibility for that electricity resumes
- DTE will work with the pilot anchor tenant and Staff to develop a low-income option within the program that can be implemented while minimizing IT costs

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<sup>5</sup> GLREA objected to the settlement regarding several issues, consistent with the concerns outlined in the earlier sections. Soulardarity explained in testimony that it does not object to but will not sign the partial settlement agreement. Soulardarity recognized the progress the partial settlement agreement may bring to low-income customers and communities of color in terms of opportunities for renewable energy projects but contended that the agreement does not go far enough. See page 32 of the MPSC Order issued June 9, 2021, in Case U-20713.

## Low-income Solar Pilot

The settlement stipulated that DTE will conduct a Low-Income Solar Pilot and will use reasonable efforts to construct and launch three projects in three local cities (Detroit, River Rouge, Highland Park), targeting one per year from 2022 through 2024.

- a. These projects shall be a minimum size of 250 kW. Competitive bidding requirements were established and DTE will own the three projects after construction. Other ownership models will be considered for future projects after conclusion of the pilot
- b. DTE will form a Low-Income Solar Council which will help identify possible projects and establish criteria or advise on other aspects of the pilot design
  - i. The council shall be comprised of one low-income individual from each of the three identified communities plus one subject matter expert, one representative from a non-profit, one representative from DTE, and a non-voting member from the Michigan Public Service Commission Staff. Note that the community members will be paid for their service
  - ii. This council will work with the communities to identify possible site locations, may establish additional guidance and evaluation criteria consistent with the pilot goals, and will rank order a pool of possible projects to fulfill the pilot requirements
  - iii. DTE will be responsible for providing the council with project and funding criteria and then making final selection of winning bids
  - iv. DTE will work jointly with the council to determine the methodology for deciding the number of participants and eligibility criteria
- c. Funding to come through donations from DTE, MIGreenPower™ subscribers, and other donors.
  - i. DTE will provide 30% of the upfront capital for each project, up to \$300,000 per project (implying a minimum of \$900,000 total upfront capital cost for each project using funds from all sources) and agrees to forego return of and on these capital funds
  - ii. Up to 25% of the funds collected under the MIGreenPower™ Low-income Donation pilot (described above) can be directed toward this pilot to cover engineering, procurement, construction, and operating costs
  - iii. The remainder of the funding is to come from other donations. DTE is to assist the Low-Income Solar Council in seeking these funds
- d. DTE Electric will be responsible for subscribing participants to the projects and providing on-bill credits which will reflect the same general terms as the MIGreenPower™ program. Additional customer benefits are expected to be available in the second and third projects based on subscriber participation in an energy assessment and for using an energy data device and app.

## Remaining concerns regarding the settlement agreement

Fifteen parties signed the settlement agreement, one party contested it, and one party did not contest but filed comments critical of some aspects of the settlement agreement. Specifically related to the low-income proposals, key concerns by the parties who did not sign onto the settlement agreement were consistent with the objections raised earlier. These critics sought: higher bill credits, opportunities for alternative ownership of

the projects, increased decision-making control for the low-income customers being served, and a more stable funding source than donations.

During interviews, some parties who did sign on to the settlement agreement stated that they felt the agreement represented significant progress and resulted in innovative programs. The settlement reflects multiple compromises by various parties, many of whom hope that additional progress will be made through and after the initial Low-Income Solar pilot projects are built. Topics where additional progress was desired were consistent with previous testimony: additional ownership alternatives, higher bill credits, and increased engagement with low-income customers.

## SECTION #4: LEVERAGING INSIGHTS FROM THIS CASE STUDY

In reading the public records in these DTE regulatory cases, the rhetoric and various claims made throughout the process might lead one to infer that the parties were unalterably opposed to each other's positions and that designing a program that almost everyone could support was an unsolvable problem. The author suspects that similar sentiments may be shared by many stakeholders working on low-income clean energy programming across the country.

Yet a majority of parties **did** eventually come to a settlement agreement that was approved by the Michigan Public Service Commission on June 9, 2021. Why did the third attempt to gain agreement on design principles work, while the prior attempts failed? What can be learned from these efforts that can be generalized to help others, in different locations and with different stakeholders, come to agreement on how to best design low-income renewable programs?

### Key considerations in negotiating a solution

Through interviews with multiple parties involved in the negotiations that led to the settlement agreement, several themes emerged.

First, it took extraordinary effort and perseverance to reach agreement among the large group of stakeholders with differing priorities and entrenched positions. Several times, the parties appeared to become deadlocked and that no settlement could be reached. One very experienced individual stated that they had never before seen such effort put into trying to settle a case. Furthermore, most stakeholders that the author spoke with felt the settlement represented progress above and beyond what could have been accomplished through the constraints of a typical regulatory process. The typical regulatory process drives an adversarial environment, with parties arguing for or against utility proposals with no formal process for driving compromise solutions. Furthermore, in a negotiated settlement, parties can and often do agree to provisions that the regulator would not have authority to mandate.

Second, negotiations were made even more difficult by having some parties who either had a very narrow set of issues that they cared about or whose priority issues seemed to change over time. One individual said that productive negotiations can be had with parties who have clear and consistent lists of "have-to-get issues" and "nice-to-get issues". Compromises can be designed around such lists. Parties with a very narrow set of priorities or even a single issue as a priority are not as likely to compromise on their priority items. And parties who have not clearly thought through their priorities can cause negotiations to drag on as they come up with yet another issue after their previously identified issues have all been addressed. Structuring conversations to bring these issues forward early in the process will increase the chances for success, or at least hasten the process of revealing an impasse.

Third, economic issues are crucial and must be addressed in a cohesive manner. The author acknowledges that there are many critical program design elements that are not explicitly related to money, as detailed in the next subsection. To some stakeholders, these non-economic issues may even take priority over economic issues. But deciding who will fund the program, who will bear the risks of the program, and who will profit from the program (if anyone) needs to be comprehensively addressed for a program to be successfully implemented.

These themes reinforce the need to develop tools and processes to aid parties in coming to consensus so that new low-income renewable programs can be designed, implemented, reviewed, and then scaled and replicated so that low-income customers can equitably participate in and benefit from this country’s accelerating transition to a clean energy economy.

10 fundamental design questions to ask

Even when there is strong support across stakeholders for developing low-income renewable programs, all stakeholders come to the table with their own set of goals, interests, and priorities. A good way to surface the differences in each stakeholder’s goals and priorities is to work together in a structured way to collaboratively design a program.

Detailed in the next subsections are 10 fundamental design questions that the author considers necessary to answer when developing a low-income renewable program. By answering these questions together, and by sorting through and assessing the possible options together, a cohesive design can emerge which reflects stakeholder groups’ priorities as compromises are negotiated and agreed upon.

It is fairly easy for a stakeholder to simply react to a proposal that someone else designed and to criticize one or more design elements as not reflecting that stakeholder’s priorities. But doing so does not actually create a solution or result in programs being implemented which actually help low-income customers.

It is much more productive – and the chances of getting to a successful solution are much greater – when stakeholders put in the hard work of collaborating to design a program that can be implemented successfully. Answering the following questions together early in the design process is critical not only because answers to some questions will impact the options available under other questions, but also to quickly surface the key areas of agreement and disagreement. Ten fundamental design questions are outlined below and discussed in more detail on the following pages:

**Goals for the Program**

- Who is the program designed to serve?
- How will success be measured?

**Benefits of the Program**

- What benefits will participants receive?
- Are there secondary benefits? i.e. societal benefits accruing to non-participants
- Who will own the renewable assets? (and thus receive the benefits of asset ownership, if any)

**Costs of the Program**

- How much will the program cost?
- Who ultimately funds the program?

**Running the Program**

- Who are the decision makers for key program elements?
- Who will run the program? i.e., day-to-day operations and asset management
- How will program risks be mitigated and who will own the remaining risks?

## Deeper dive into fundamental design questions

### Goals for the program

- 1. Who is the program designed to serve?** The starting point for designing any program should be a focus on the customer of the program. It is not enough to simply say that your program will serve “low-income customers.” Your target market must be described in a way that allows everyone to know who is eligible for the program and who is not. This question is focused on defining eligibility criteria, which could include income qualifications, inclusion in a designated or protected group, residents of a particular neighborhood, homeowners or renters, those participating in specified existing assistance programs, etc. Broader criteria may expand the potential participant pool but – due to limited resources – each participant may get a smaller benefit. Narrower criteria may increase the per-person benefit but limit the number of customers served. Other questions to ask include: Will there be various levels of benefits tied to various levels of eligibility? If the eligibility criteria result in a pool of potential participants that is larger than can be served, decisions must be made on how to select participants. Eligibility criteria also impact the enrollment process and communications / outreach processes. How will you verify that a person meets the criteria? How will you ensure that communications efficiently reach eligible people without creating false expectations among those not eligible?
- 2. How will success be measured and monitored?** What constitutes success when implementing a low-income renewable program? Number of enrollees? Average bill savings? Average percent reduction in energy burden? Number of projects in local communities? Jobs created? There is an almost endless list of possible ways to assess the success or failure of a program. Success metrics and a cadence for reporting results should be established upfront during program design, rather than after implementation has begun, to ensure shared expectations and to enable collection of required data for reporting and evaluation.

### Benefits of the program

- 3. What benefits will participants receive?** This question is focused on benefits to be directly received by participants. In the DTE case study, various stakeholders put a priority on participants receiving immediate, tangible, economic benefits in the form of monthly bill savings. Yet many of these same stakeholders felt that the program should not be designed solely to maximize those economic benefits. Non-economic benefits were also cited as priorities. Tradeoff decisions are generally required regarding the benefits received by a participant versus a community and versus the cost of the program. For example, when is it more important to support the program with a renewable asset that produces electricity at the lowest possible cost versus using a higher cost but locally sited renewable asset which may deliver additional non-economic benefits? Other questions to consider include: Who will own the renewable energy certificates produced through the program? Should benefits vary over time or other factors, or should benefits be fixed? Should different participants receive different levels of benefits based on their eligibility criteria and/or on their actions and engagement? Note that the settlement in the DTE case allowed for participants to earn additional benefits by taking additional actions related to

managing energy consumption. What is the appropriate level of benefits and how should they be calculated, given the characteristics of the program being designed? For instance, calculating bill credits associated with the value of renewable generation outputs can be done in many different ways, with many pro's and con's that can be cited by the proponents of each approach. More discussion on this aspect is discussed below, under question #5.

4. **Are there any secondary benefits (e.g., positive externalities or societal benefits accruing to non-participants)?** Is the goal of the program to maximize the amount of new renewable electricity, thereby accelerating the displacement of fossil fuel generation whose emissions disproportionately impact low-income communities? Or are local benefits of higher priority (such as economic development, tax revenues, brownfield redevelopment, local wealth creation, local jobs or training, etc.) A frank discussion on how to prioritize participant benefits versus secondary benefits will be critical and should include perspectives from those whom the program is intended to serve.
5. **Who will own the renewable asset (and thus receive financial returns or benefits associated with asset ownership, if any)?** Ownership of the renewable asset supporting the program is often a contentious issue when designing low-income renewable programs. That certainly was true for this case study. Will the underlying renewable asset be owned by the utility? A non-utility developer? Or those served through the low-income renewable program (e.g., community ownership)? If a community ownership model is desired, then an operator will most likely also need to be identified (see question #9). The financial benefit of owning the underlying renewable asset is directly linked to the valuation of the asset itself and/or its generation output. To the extent that these renewable assets are not directly and solely connected to participant homes, then excess generation output or the entire generation output of the renewable asset will be sent to the utility grid either to be sold on the market or sold to the utility (who would in turn either produce less from their own generating assets or purchase less from the market).

Utilities generally recover their costs and earn a reasonable and regulated return on and of their capital investments, while the value of the generation output is passed along to utility customers at whatever price is received when that output is sold into the market. Thus, utilities earn financial returns by owning assets versus selling generation output and are generally indifferent to the sales price for the generation produced by assets they own.

Third party renewable project owners, whether they are developers or community groups, generally earn returns based on selling the output of their assets. These parties have often argued that the appropriate compensation for the generation output of the renewable assets they own should be equivalent to retail electricity rates or higher if external benefits<sup>6</sup> are considered. Utilities have often argued that the appropriate compensation to third party renewable owners should be equivalent to the value of the displaced power that the utility did not produce or purchase, so that their customers are held harmless from a cost perspective. This paper will not debate the different points of view, but

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<sup>6</sup> An internet search on "value of solar" will return multitudes of articles, policy papers, and studies that assess the value of distributed solar using many different methodologies. Studies that include external benefits such as health and environmental impacts tend to calculate higher values for solar. Studies that focus on avoided costs tend to result in a value of solar calculation that is lower than retail electricity prices and is close to the wholesale or market costs for electricity and the capacity to produce electricity. The author has not relied on a single source for these comments, but rather on years of experience in the industry.

simply notes that asset ownership and the price paid to owners for the output of their assets are critical issues in the design of any low-income renewable program.

## Costs of the program

- 6. How much will the program cost?** A true and full picture of lifetime costs is critical to making informed decisions about a program. Timing and variability of the costs should be considered and factored into the overall design. Sufficient budget should be allocated to such things as communications, outreach, education, ongoing support, information technology requirements (such as billing system implementation costs), and ongoing administrative and reporting costs. How does the proposed cost compare to similar other programs? What measures will be taken to ensure that the costs are reasonable? An example might be to require competitive bidding for the procurement of key assets or services. How will the decision makers prioritize costs versus risks or safety and quality assurances or other non-economic factors when assessing options? Do the forecasted costs appear to be allocated appropriately across categories? For instance, are the forecasted cost-per-customer-enrollment costs reasonable? How will actual costs be monitored against budgeted costs? How would higher than expected costs be dealt with (linked to question #10)? Are there negative externalities that could be considered as costs of the program? For instance, there may be an opportunity cost related to land usage, raising questions about the best and most useful way to utilize a parcel of land within a community.
- 7. Who ultimately funds the program?** Delivering immediate, tangible, economic benefits to low-income customers through a renewable program implies that parties other than the low-income participants are covering at least some of the program costs. Who should pay these incremental costs? Should the incremental costs be spread to non-participating utility customers in the form of higher rates? And if so, should those incremental costs be allocated across all customer groups, or just residential customers? If outside funding is desired, who is responsible for securing such funding? Is the funding source sustainable over the life of the renewable asset supporting the program? If not, who will step in with funding as needed (linked to question #10)? In general, possible funding sources are: participants, non-participating utility customers, utility shareholders, government (i.e, taxpayers), non-profits, and other third-party donations. Clarity on the program's funding sources over the life of the program is important.

## Running the program

- 8. Who are the decision makers for key program elements?** While many decisions can be made or anticipated during the program design process, there will be implementation decisions that need to be made by a person, entity, or group. Who will make the decision on a specific renewable site, or specific vendor, or specific tactic to best reach out to eligible customers? Achieving procedural justice requires that people from the communities being served be involved in making meaningful program decisions. The right balance must be struck to ensure appropriate and inclusive involvement while not bogging the program down with bureaucracy. Which decisions will require input or approval from others, versus being delegated to

whomever is operating the program? And who are those others who will provide such input and/or approvals?

- 9. Who will be responsible for running the program (e.g., day-to-day operations and asset management)?** A program cannot be successful without competent and diligent implementation and administration. Some person or entity must be designated to make day-to-day decisions, resolve issues, and to ensure that the program runs smoothly. Questions that need to be answered include: Who will be responsible for enrollments? For billing? For reconciling forecasts to actuals? Who is responsible if the program outcomes do not match expectations? Who is responsible for resolving issues and answering questions from participants? Who will maintain and operate the renewable assets? Who is responsible for any capital improvements and ultimate disposal of the assets? Who makes “fix versus replace versus retire” capital decisions?
- 10. How will program risks be mitigated and who owns the remaining risks?** Renewable generating projects have long lives and require considerable upfront capital investment. Ideally, the owner of such a project would like to contract to sell all the output through a fixed price contract lasting for the full expected life of the project to ensure cost recovery and an adequate return. Conversely, the buyer of the output typically would want to lock in a good price at the beginning but still have flexibility to end or reprice the contract if future renewable energy costs go down, or adjust volumes based on changing needs. In designing a low-income renewable program, choices must be made on who will bear the risk of cost over-runs, lower than expected sales volumes / unsubscribed amounts, participant defaults, operating risks, and a myriad of other possible risks. Often, it is argued that the local utility is in the best position to bear these risks due to their ability to pass through unexpected costs to the utility’s customer through base rates. Tied to question #7, choices must be made about whether non-participating utility customers will bear some of these risks in order to keep program costs reasonable. If the renewable project owner will bear all of these risks, then it should be expected that the project owner will require a commensurately higher return, possibly through a higher price when selling the generation output. Conversely, if the project owner is relieved of some of these risks, the returns and/or sales price should be lower.

The above list of fundamental design questions is not exhaustive. There are many more design and implementation decisions that must be made to launch and run a new low-income renewable program. However, starting with these fundamental design questions should enable groups of stakeholders who are sincerely interested in implementing programs that help low-income customers to more quickly and constructively work through contentious issues in a thoughtful manner.

## SECTION #5: PROPOSED NEXT STEPS IN SUPPORT OF EQUITY IN A CLEAN ENERGY ECONOMY

This case study reflects the efforts, false starts, and ultimately successful process taken by DTE Energy and more than a dozen local, regional, and national stakeholder and advocacy groups to design three renewable programs which target low-income customers. Through an analysis of the various positions and the issues which were most difficult to resolve, the author has identified 10 fundamental design questions that should be addressed early in the program design process. These design questions should ideally be answered in a collaborative manner including representatives of the stakeholders most invested in the success of the program – especially the low-income customers for whom the program is being designed to serve.

The author recommends that the Equity in a Clean Energy Economy Collaborative and its members utilize and test the 10 fundamental design questions presented in this paper. This can be done by using the questions to systematically compare existing programs and proposals, and also by using the questions to collaboratively design new low-income renewable programs under real-life situations in different communities and with different sets of stakeholders. Furthermore, the Collaborative may find ways in which these questions could be incorporated into its efforts to develop an analytical framework (see Appendix 1, Track 1) or another tool that could be used in conjunction with such an analytical framework.

The author also recommends that the Equity in a Clean Energy Economy Collaborative and its members follow and learn as these new programs are implemented. These new programs to be implemented by DTE Energy, with assistance and oversight from the Low-income Solar Council, are innovative and offer an opportunity to test out different program designs and tactics. The hard work, diligence, perseverance, and collaboration that was needed to gain agreement on the overall design of these programs will need to continue to ensure that both the programs and the Low-income Solar Council live up to all of the potential they promise. While there are bound to be additional challenges to overcome, the author is very encouraged by the support and momentum behind these programs and the opportunity to better address the needs and renewable goals of DTE's low-income customers.

## About the Author

Irene M. Dimitry recently retired as vice president, Renewable Energy at DTE Energy. Irene was DTE Electric's key business lead in legislative negotiations that resulted in Michigan's renewable portfolio standard and energy efficiency goals being established in 2008. After this law was passed, Irene was charged with creating new teams to implement the law, developing and executing strategies to source 10% of the company's generation supply from renewable resources (later increased to 15%), and reducing annual electric and gas consumption (by 1% and 0.75% respectively) through energy efficiency programs.

For over 12 years, Irene led all aspects of DTE Electric's renewable and energy efficiency business units, along with responsibilities for long-term strategic planning for the utility including decarbonization strategies. Overseeing \$3 billion of direct renewable investment, Irene and her team grew DTE's renewable business to include a portfolio of over 1,500 MW of wind and solar projects.

DTE's energy efficiency programs have exceeded legislative targets each year, helping its customers save energy and keep bills affordable. DTE was ranked #8 in the country for its overall energy efficiency programs by the American Council for an Energy-Efficient Economy in their 2020 report and was one of only 9 utilities in the country to be awarded full scoring points for their low-income energy efficiency programs. DTE is ranked as #3 in the low-income section the ACEEE report.

Now that she is retired, Irene is an independent consultant focusing on renewable energy, energy efficiency, and decarbonization strategies.

## Acknowledgements and Key Sources

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- Will Kenworthy of Vote Solar
- Judith Schwartz of To the Point

Key sources for this case study include the public filings in MPSC Case U-20561 (DTE Electric general rate case, filed in July 2019), in MPSC Case U-20713 (DTE Electric renewable plan case, filed August 2020), and interviews with witnesses and intervenors in these cases.

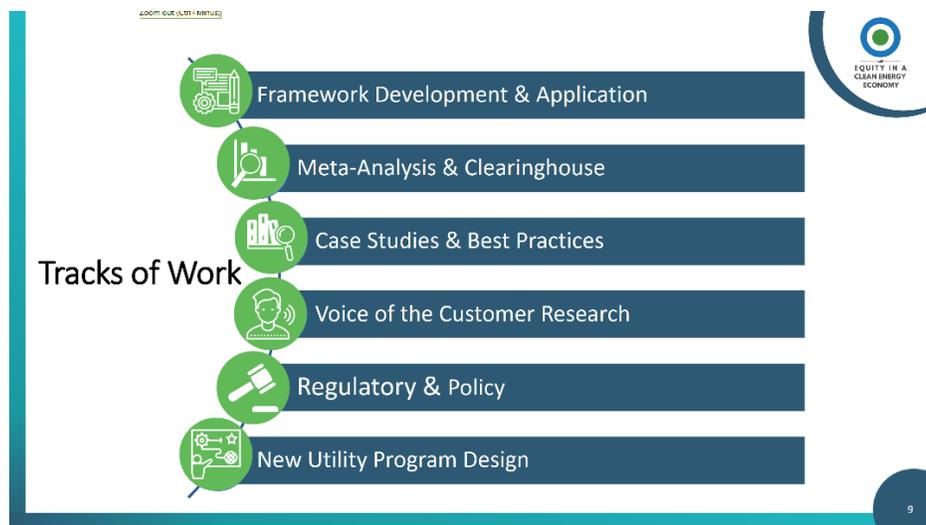
## APPENDIX #1: Equity in a Clean Energy Economy Collaborative

“Utilities have an obligation to provide safe, affordable, reliable energy to all. We believe the time has come to expand the traditional compact in the utility sector to include clean energy and new perspectives on equity. We must consider the impacts on the grid, the traditional utility business model, and customers, especially around affordability and access. Particular attention is needed to ensure that at-risk customers share in the benefits of the transition to a clean energy economy.”

Jamie Wimberly, CEO, DEFG LLC

DEFG has launched a nation-wide collaborative titled, “Equity in a Clean Energy Economy (ECEE)” whose mission is to identify new approaches and tools to address equity issues for at-risk communities during the transition to a clean economy.

This new collaborative will include a wide range of stakeholders to give voice to many perspectives. An ongoing stream of research will facilitate discussion among these stakeholders. There are six tracks of work planned within the collaborative:



This case study is intended to support and feed into Track #1: Framework Development & Application, Track #3: Case Studies & Best Practices, and Track #5: Regulatory & Policy.

## APPENDIX #2: MIGreenPower™, A Voluntary Renewable Offering from DTE

MIGreenPower™ is a voluntary renewable energy program open to all of DTE's 2.2 million full-service business and residential electric customers. First approved as a pilot in October of 2016, the program provides interested customers with an easy and affordable way to reduce their carbon footprint by increasing the percentage of their energy usage that is attributed to DTE's newest renewable projects. By choosing to increase the portion of their usage sourced by renewable resources, MIGreenPower™ subscribers are supporting the continued use, maintenance, and growth of renewable energy projects across Michigan. The renewable projects sourcing MIGreenPower™ were built specifically and incrementally to support this program. The renewable energy credits generated are retired in the name of the participating customers and do not count toward DTE's renewable portfolio standard requirements.

### Customer Subscription Options

Customers who subscribe to MIGreenPower™ can elect to increase the amount of renewable energy they use in 5 percent increments, up to 100 percent. DTE electric customers already receive a daily energy generation fuel mix that includes 15% renewable energy. Therefore, participation in MIGreenPower™ can range from 5% to 85%. Customers can currently choose a mix of wind and solar, or wind only, as the resource serving them through MIGreenPower™. Participating customers will see a slight increase to their monthly bill depending on the level and type of renewable energy they select while knowing they are helping to support Michigan's clean energy future.

### How Program Pricing is Determined

MIGreenPower™'s subscription fee is an average of the cost of ownership for the renewable generation facilities sourcing the MIGreenPower™ program, plus a small marketing and administrative charge. The Michigan Public Service Commission reviews and approves all of the renewable generation facilities sourcing MIGreenPower™ and their associated costs.

The cost of ownership includes the initial cost to build the projects and all ongoing operations and maintenance costs associated with the projects over the life of the facility.

The bill credits are based on the costs to the utility to purchase traditional energy and capacity for all customers, with the understanding that MIGreenPower™ subscribers do not incur these costs for the portion of their energy that is matched through the MIGreenPower™ program. Customers may unenroll at any time without a penalty.

### By the Numbers

The average net premium for customers with less than 1 MW of peak demand to subscribe to the 2021 MIGreenPower™ Wind & Solar program is 3.1 cents per kWh and the average net premium for subscribing to DTE's Wind program is 2.2 cents per kWh. This net premium for each program is in addition to the customer's monthly bill. Depending on energy usage and commitment level, average customers can expect to pay anywhere from \$5 to \$25 per month to subscribe to MIGreenPower™. The net premium associated with the MIGreenPower™ programs may change over time as DTE reviews and adjusts the bill credit annually. ***The net premium is expected to decrease as a result of the recent settlement agreement associated with DTE's renewable energy plan, that was approved in June 2021.***

Once enrolled, MIGreenPower™ subscribers can expect two additional line items on their next bill — one for the premium subscription fee and another as savings in the form of a monthly credit.

In 2020, MIGreenPower™ subscribers supported more than 45 million kWh of clean energy generation, which has the environmental benefit equivalent to taking nearly 7,000 cars off the road for a year. Since the program's inception, MIGreenPower™ subscribers have supported nearly 100 million kWh of generation from wind and solar.