

**Climate Action Council Draft Scoping Plan Comments**

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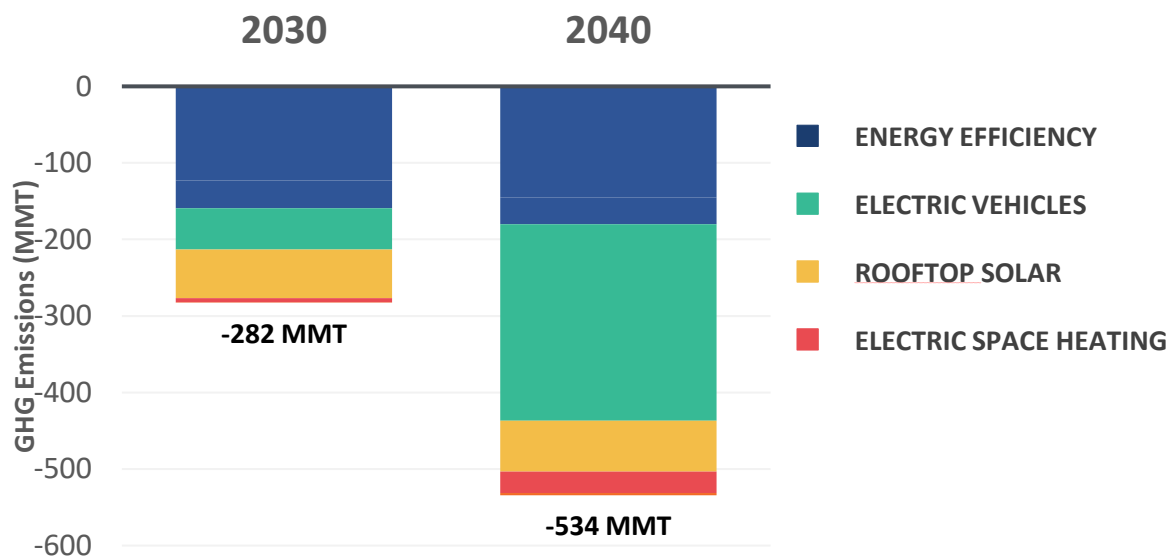
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**Supply versus demand side solutions**

New York is actively investing in and developing solutions to decarbonize the supply of power generation. This approach is fundamental and will be the cornerstone of mid-to-long term climate solutions. This approach also takes time and requires a significant financial investment. We cannot allow a focus on generation to come at the expense of leveraging near term reductions in emissions at a time when we need them the most.

A [recent study focusing on utility customer actions](#) conducted by Opower and The [Brattle Group](#), illuminates the relative emissions impacts of various actions – both energy supply relative to demand solutions, and demand-side solutions relative to each other. Of all the demand-side actions (electric and gas efficiency, distributed solar, EV adoption, and home electrification), energy efficiency makes the largest single contribution in 2030 and is only outpaced by EV adoption in 2040.

*Brattle Customer Action Pathway - Nationwide GHG Emissions Impacts*



The research also found that these consumer-driven demand-side solutions can contribute nearly *two-times the avoided emissions value* than that of supply-side solutions alone. These solutions come at the lowest cost. The McKinsey 2030 global [GHG abatement cost curve](#) shows existing building energy efficiency measures having the lowest cost per avoided GHG (relative to supply-side solutions such as CCS, renewable generation and nuclear).

The National Association of Regulatory Utility Commissioners (NARUC) has recognized this untapped

value and during its 2021 national conference passed a [resolution](#) calling on states to take action to maximize the impacts of energy efficiency programs in order to control energy costs and rates, and cost-effectively decarbonize.

While the draft plan often references the value of near-term resources such as energy efficiency and references New Efficiency: New York (NENY), the details are opaque and do not appear to fully account for the potential of these solutions. According to NYSERDA's 2015 [potential study](#), the 2030 achievable savings potential from energy efficiency is nearly 600 TBtu. That number can be contrasted to the NENY target, which sets a total target of 182 TBtu by 2025.

### **The value of behavioral solutions**

New York's track record on energy efficiency, while greatly improved with NENY, is still lacking. New York utilities are incentivized to focus on specific outcomes (i.e., arbitrary effective useful life – EUL – metrics) rather than achieving all cost-effective energy efficiency or a focus on emissions. This forces utilities to pick and choose winners regardless of the contribution to state emissions targets. This policy is also counter to climate science and ratepayer equity. While all utility energy efficiency measures have decarbonization value, behavior-based energy efficiency provides the [lowest cost solution](#) on a dollar per avoided GHG basis and is accessible to all utility customers regardless of housing type and income. It also happens to have a short EUL.

One behavior-based utility program in New York was cut in half between 2019 and 2020 due to an earning adjustment mechanism (EAM) incentive focused on structural measures and EUL. While short lived, behavior-based energy efficiency can drive savings at scale, far out producing the avoided emissions of other measures. These savings are driven by educating and empowering consumers through a combination of data science, behavior science and artificial intelligence (AI). In this one program example, electric savings from dropped from 77,164 MWh in 2019 to 45,677 MWh in 2020. According to the EPA AVERT model, that left over 16,000 metric tons of CO<sub>2</sub>e on the table. That's the same value as **taking 3,548 cars off the road for an entire year.**

Our atmosphere has a limited budget of how much GHG it can absorb. Everything we prevent from emitting today matters - and arguably matters more than what you commit to avoiding ten years from now.

### **The Value of Demand Flexibility**

While not a major direct contributor to avoided emissions, load flexibility is a key enabling tool on our transition to a decarbonized future. Load flexibility (e.g., smart thermostat programs, behavioral demand response, peak time rebates, time-varying rates) reduces reliance on high emitting peaking plants, facilitates the integration of renewable energy resources, reduces renewable energy curtailment, and mitigates the need for system upgrades to serve rising peak demand. There is a significant amount of untapped load flexibility potential in the residential sector in particular. This potential will grow as more customers adopt EVs, heat pumps, batteries, smart thermostats, and other technologies. A 2019 Brattle study estimated that national load flexibility potential is 200 GW in 2030 (roughly 20% of peak demand) and more than half of the untapped potential comes from the residential sector.

Achieving this potential will require deliberate efforts to remove significant technical, market, and regulatory barriers. I was pleased to see the plan takes this on by including a recommendation to

develop opt-out demand flexibility programs. Opower has a long history of operating opt-out programs on behalf of utilities. Opt-out designs are particularly important in the residential market where residential loads can be small on an individual household basis but make a real difference at scale.

In our experience with opt-out demand flexibility programs (including behavioral demand response and peak time rebates) communication tools matter greatly. Not only does one need the right message, but the sender also needs to use the right channel at the right time. For peak event driven programs, the utility will need to reach its customers via multiple avenues (text, email and automated call). Using automated calls and texts is a key driver for delivering peak savings. On average, Opower has found that leveraging opt-out interactive voice response (IVR) and text will increase the population available to participate in events by at least 50% (not everyone is email enabled with their utility) and significantly improve demand savings.

### **Equity**

Many of the solutions included in the scoping plan (and referenced in my comments) rely on ratepayer funded programs (e.g., utility energy efficiency and demand flexibility programs). While equity conversations most often – and rightfully so – focus on making lasting change in the built environment, sometimes that comes at the expense of other broad-based programs at scale. This is the case of the utility earnings incentive discussion above. The result is using ratepayer resources to invest in long-lived investments for which only a fraction of today's ratepayers will benefit.

While it is imperative to retrofit and electrify our aging building stock, we cannot only invest in things that will take decades to deploy and serve a fraction of the population – and ratepayers.

### **Conclusion**

I sincerely appreciate the open dialogue and multiple opportunities New York has created for stakeholder input. If I or others at Opower can provide additional context or support in other ways, please let me know. As the largest company in the world with a dedicated focus on leading edge utility software, and a mission to influence customer action on an incredible scale to drive decarbonization, we want to be your partner on this ambitious climate journey.

Sincerely,

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*Cc: PSC Chairman Christian, PSC Commissioner Alesi, PSC Commissioner Howard, PSC Commissioner Burman, PSC Commissioner Edwards, PSC Commissioner Valesky, PSC Commissioner Maggiore, Marco Padula (DPS), Peggine Neville (DPS), Kevin Manz (DPS), Kevin Hale (NYSERDA).*