

## Elmer, Linda

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**From:** Shambarger, Erick  
**Sent:** Wednesday, April 14, 2021 2:59 PM  
**To:** Elmer, Linda  
**Subject:** FW: ICLEI Modelling Proposal

This can be shared with the members....

**From:** Tom Herrod <[tom.herrod@iclei.org](mailto:tom.herrod@iclei.org)>  
**Sent:** Monday, March 29, 2021 6:10 PM  
**To:** Bruce Wiggins <[brucewathome@gmail.com](mailto:brucewathome@gmail.com)>; Eli Yewdall <[eli.yewdall@iclei.org](mailto:eli.yewdall@iclei.org)>; Kraig, Ted <[KraigT@weac.org](mailto:KraigT@weac.org)>; Donath, Matthew <[Matthew.Donath@milwaukee.gov](mailto:Matthew.Donath@milwaukee.gov)>; Pam Ritger <[pritger@cleanwisconsin.org](mailto:pritger@cleanwisconsin.org)>  
**Subject:** ICLEI Modelling Proposal

Hello Everyone,

Thank you for your time today in reviewing our proposed approach and providing input. Below are the next steps we will undertake as well as two items highlighted in yellow that we will need from your side. I am on vacation for the remainder of the week but Eli and I will start putting this together early next. Feel free to provide any corrections to our assumptions.

### Buildings

- Mandatory Benchmarking and Disclosure Ordinance
  - Assume applies to buildings 25,000 sqft and larger
    - Need from From Matt - SLOPE analysis to determine more accurate accounting of true Commercial footprint including:
      - Amount of Sqft that is in buildings < 25,000 sqft
      - Total Sqft of Commercial
  - ICLEI will use CBECS for average energy use intensity
  - ICLEI will use recent Benchmarking Program Data as described by the City Energy Project/ACCC
- Building Codes
  - Model Code improvements to 2021 from 2009
    - ICLEI will use data from ASHRAE, IECC, & ACEEE
    - Above Code Requirement for City Incentivized projects (commercial and residential)
      - Need from Erick an estimate of # of commercial projects/size of projects this could impact
    - Electrification of New Commercial

- Net Zero Code for future projects
  - Assume 500 units of new housing will be Net Zero with renewables and Passive Heating
- Residential Weatherization and EE
  - Currently 1,000 units are serviced annually (ICLEI will review 2018 report and modify as needed)
  - Model more units (2,000) and deeper retrofits (assume fully weatherized and brought to 2021 IECC standard for insulation and appliances)
  - ICLEI will describe equity components of impact of energy efficiency for Income qualified homes

#### Transportation

- ICLEI to propose a VMT reduction based on publicly stated goals and targets of similar US cities
- ICLEI will model this VMT reduction over a time period representative of the type of projects in the above example (note Transportation projects are often phased, so the total VMT reduction will be incrementally met)
- ICLEI proposes an EV conversion rate based on similar goals in similar US cities. ICLEI will note where state/local incentives are in place and how that impacts EV ownership. ICLEI to provide additional narrative on "How to drive EV sales" [See C40 article for a great breakdown of needed elements](#)

#### Grid Additional PV Projects for Large Milwaukee Commercial Accounts

- ICLEI will use PV Watts assumptions with high efficiency and high capacity factor panels
- ICLEI will model 100MW project and used existing Badger Hollow Solar Farm assumptions
- ICLEI will model a back of the envelope calculation of how much Solar would be needed to power Milwaukee's Commercial, Residential, Transportation Energy
- ICLEI will reference Google EIE data for rooftop potential within the boundary of Milwaukee for comparison.

**Tom Herrod**  
Senior Program Officer

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