

# VULNERABLE HOUSEHOLDS AND SMART GRIDS

Ian Rowlands

presentation on Session 2C:

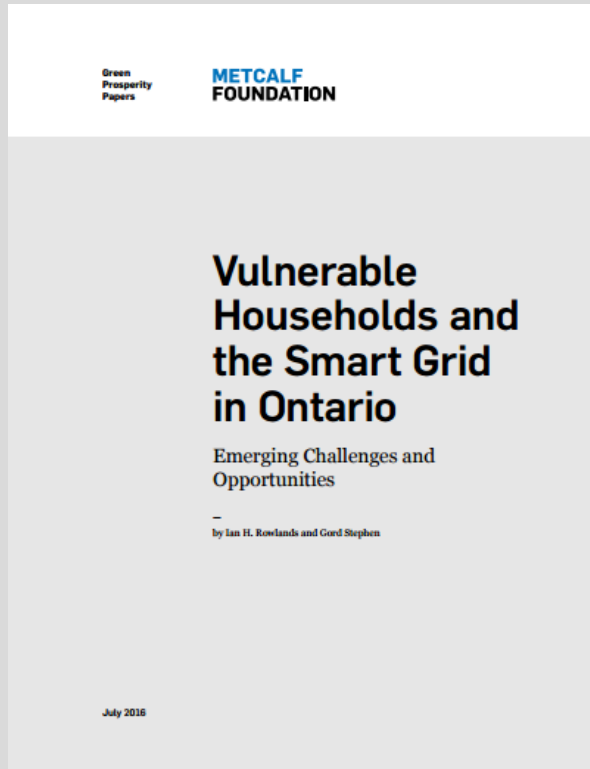
Addressing Challenges Faced by Low-  
Income Communities



@IanHRowlands



# DRAWING FROM THIS REPORT ...



[http://metcalffoundation.com/wp-content/uploads/2016/07/Metcalf\\_Green-Prosperity-Papers\\_Smart-Grid\\_final\\_web.pdf](http://metcalffoundation.com/wp-content/uploads/2016/07/Metcalf_Green-Prosperity-Papers_Smart-Grid_final_web.pdf)  
<https://www.linkedin.com/in/gordstephen/?ppe=1>

# PURPOSE

- To catalyze discussion regarding linkages between two sets of issues in Ontario – namely, advocacy and analysis on the part of vulnerable households and increased attention being given to smart grid developments



# OUTLINE

- Context
  - » Vulnerable households
  - » Smart grid developments
- Connections
  - » Electricity data
  - » Electricity partnerships
  - » Prosumers
  - » Sharing economy
- Recommendations and discussion



# CONTEXT

- Vulnerable households – some relevant context
  - » *There is currently no definition of “vulnerable consumers”. LIEN recommends that this term should be clearly defined in the OEB Act and that the definition should encompass low-income households, including single-parent led families, the disabled, seniors, and those in receipt of social assistance. (January 2015)*



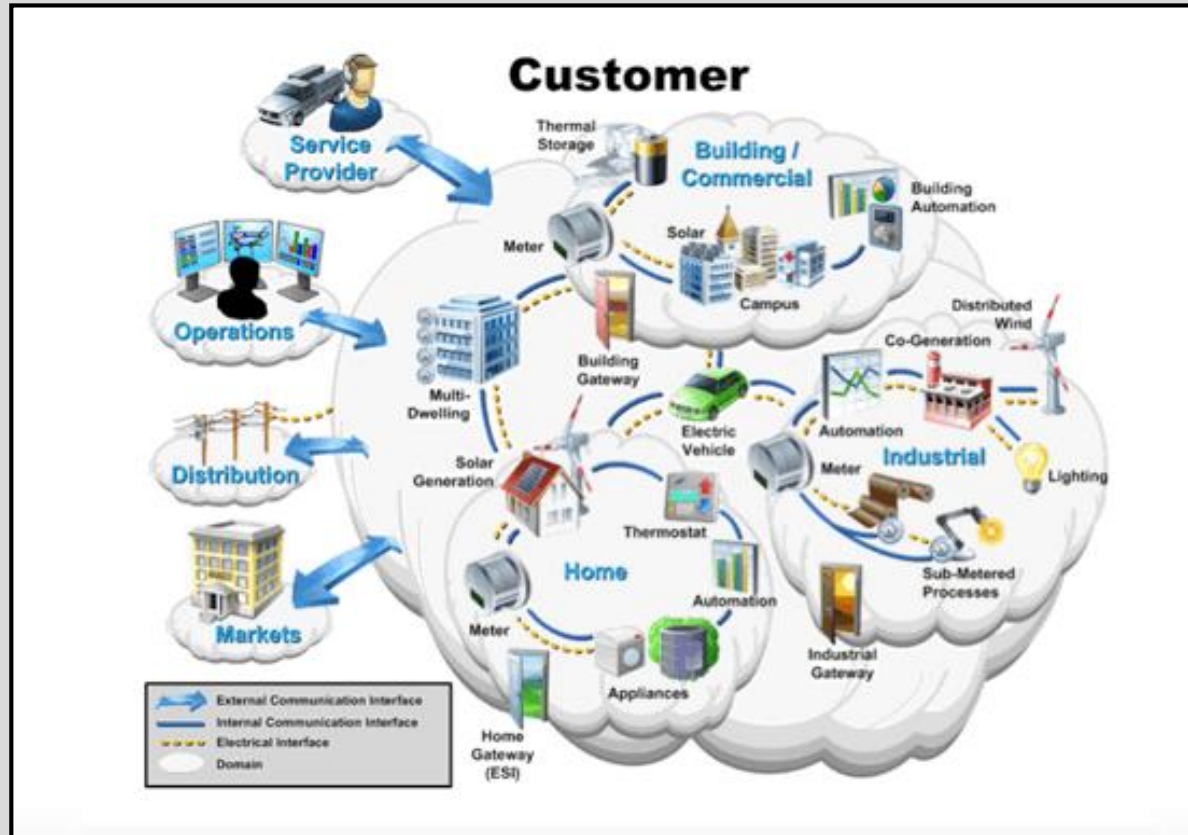
Low-Income Energy Network

# CONTEXT

- Low-income households – some relevant data
  - » 11.6% of Ontario's 4.9 million households are 'low-income'
  - » 20.4% of Ontario's 453,000 lone-parent family households are 'low-income'
  - » 25.7% of Ontario's 1.4 million renter households are 'low-income'
  - » Put another way: while 28.4% of all households rented in Ontario in 2011, 63.2% of low-income households did.

# CONTEXT

- Smart Grids



<https://www.sgiclearinghouse.org/ConceptualModel>

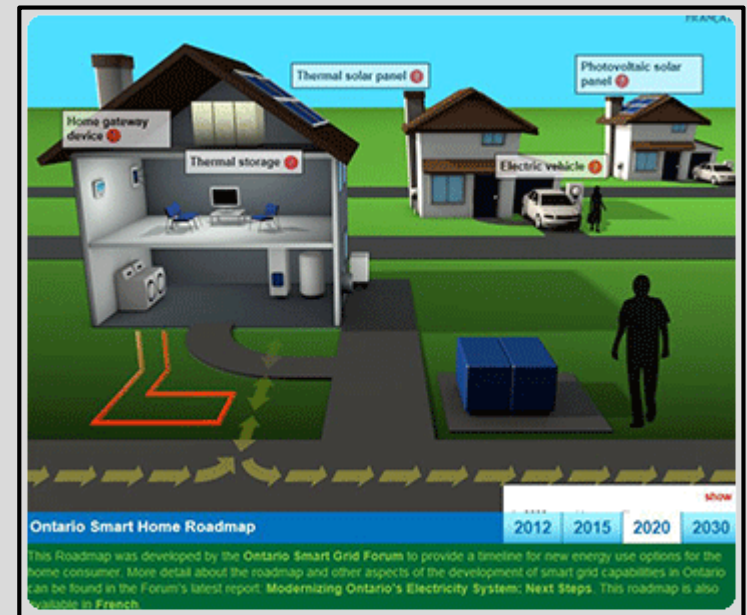
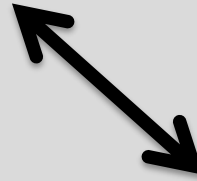


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# CONNECTIONS

## Waterloo Region Energy Assistance Program (WREAP)

Provides assistance to low-income families and individuals who need financial assistance to pay their heating and hydro bills, to avoid the consequences associated with an inability to manage utility arrears.



[http://communityservices.regionofwaterloo.ca/en/communityProgramsSupports/resources/EnergyAssistanceflyer.pdf#Energy Assistance Flyer;](http://communityservices.regionofwaterloo.ca/en/communityProgramsSupports/resources/EnergyAssistanceflyer.pdf#Energy%20Assistance%20Flyer)  
<http://www.ieso.ca/PublishingImages/Pages/Ontario's-Power-System/Smart-Grid/default/smart-home.gif>

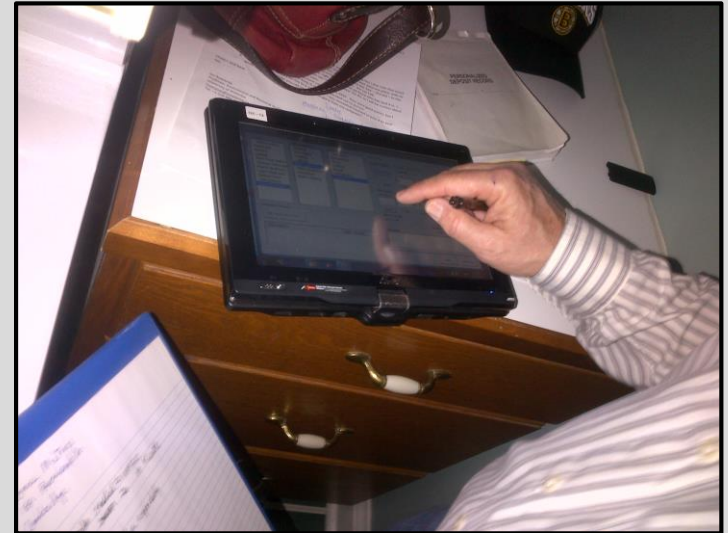


# CONNECTIONS: MORE ELECTRICITY DATA



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- Pros
  - » 'better' energy management



- Cons
  - » privacy and security issues



# CONNECTIONS: ELECTRICITY PARTNERSHIPS

- growing and deepening network of relationships among various actors



<http://solarcanadaconference.ca/attend/>



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# CONNECTIONS: ELECTRICITY PARTNERSHIPS

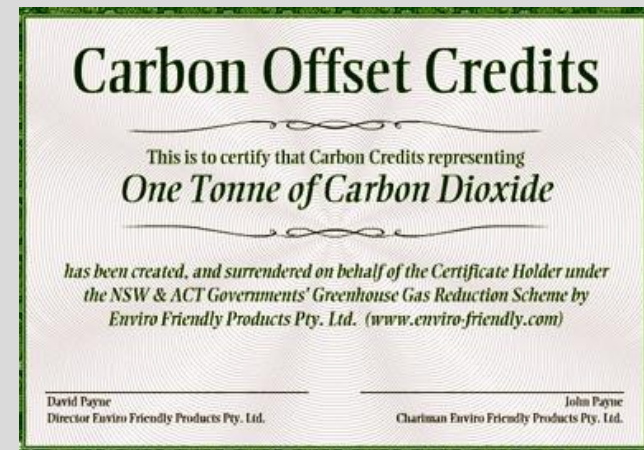
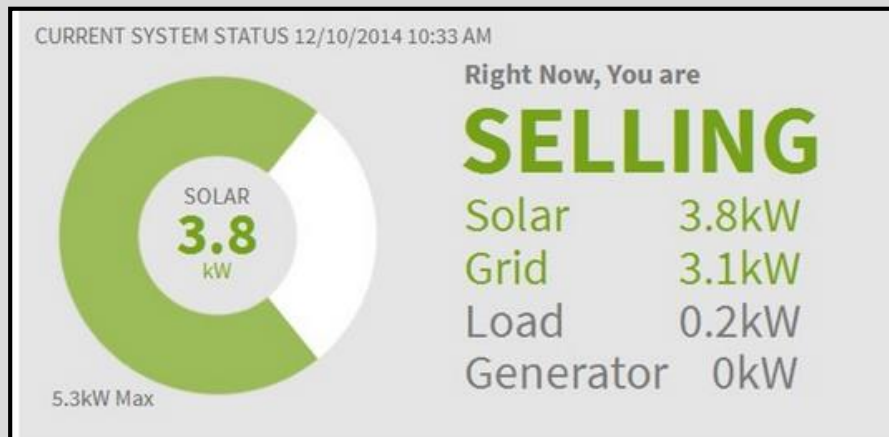
- attractiveness of the electricity account?



» [http://www.thestar.com/news/gta/2013/04/09/peel\\_region\\_services\\_for\\_poor\\_stretched\\_to\\_limit.html](http://www.thestar.com/news/gta/2013/04/09/peel_region_services_for_poor_stretched_to_limit.html);  
» [http://www.thestar.com/news/queenspark/2013/11/12/ontario\\_affordable\\_housing\\_waiting\\_lists\\_still\\_climbing.html](http://www.thestar.com/news/queenspark/2013/11/12/ontario_affordable_housing_waiting_lists_still_climbing.html)

# CONNECTIONS: PROSUMERS

- Definition of prosumer:
  - » *The term “prosumer” refers to consumers who also produce commodities or services.*



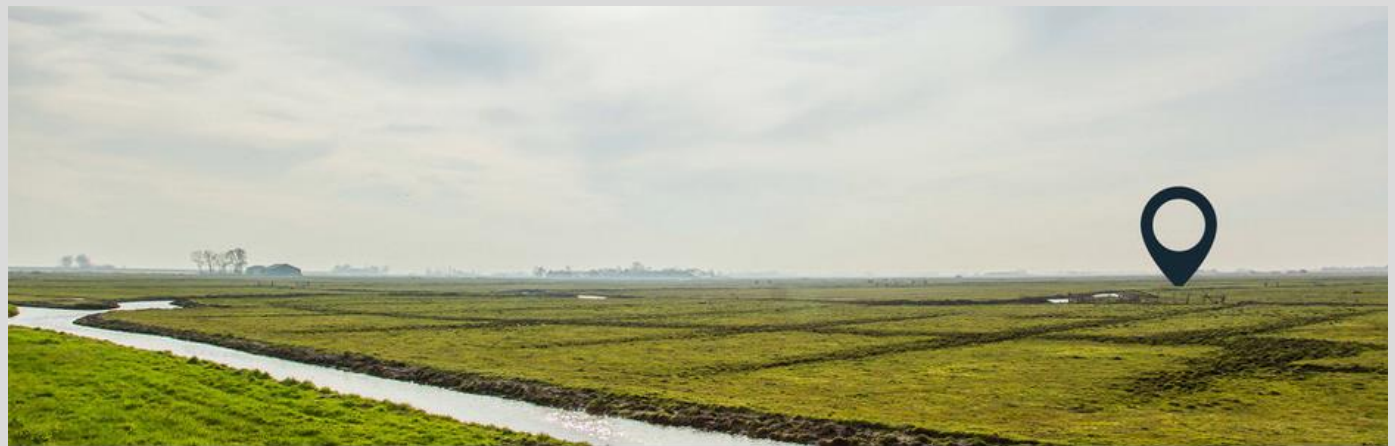
# CONNECTIONS: PROSUMERS

- potential risks
  - » inability to access inexpensive capital may be a barrier to entry
  - » lack of resilience in the face of uncertainty may be a barrier to entry
  - » lack of tenancy may be problematic
    - no 'agency' on the surrounding built environment
    - living the problematic 'split incentive' situation (vis-à-vis the landlord-tenant relationship)



# CONNECTIONS: THE SHARING ECONOMY

- What might the ‘uber-isation’ and/or the ‘airbnb-isation’ of the electricity industry look like?



*An online marketplace for energy; a world first in The Netherlands*

**vandebron**

# CONNECTIONS: THE SHARING ECONOMY

- What is thus important?
  - » engagement in a transformed system
- Low-income neighbourhoods' influence in energy siting decisions
- What happens if grid defections increase, and the 'utility death spiral' becomes a reality?
  - » utilities re-examine and potentially re-invent themselves?





# RECOMMENDATIONS

- Keep the ‘value proposition’ for vulnerable households clearly in sight
- Engage vulnerable households in smart grid development
- Take a holistic approach in energy poverty / sustainable energy policy-making



# ACKNOWLEDGEMENTS

- Metcalf Foundation
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**METCALF**  
**FOUNDATION**



# SUMMARY AND DISCUSSION

- Presenter's contact details

Ian H. Rowlands

[irowlands@uwaterloo.ca](mailto:irowlands@uwaterloo.ca)



[@IanHRowlands](https://twitter.com/IanHRowlands)

519-888-4567, ext. 35466

<http://tinyurl.com/IanHRowlands>

