# Increasing Market Share for Solar Electricity: "Virtual Net-Metering" Potential for Nova Scotia

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CanSIA
CANADIAN SOLAR INDUSTRIES ASSOCIATION | L'ASSOCIATION DES INDUSTRIES SOLAIRES DU CANADA

# ABOUT CANSIA

- CanSIA is the national trade association representing the solar industry throughout Canada.

- Policy & regulatory affairs issues that CanSIA will be working on in Nova Scotia in the coming years include:
  - Future GHG & Electricity Targets (i.e. EGSPA).
  - Labour force & supply chain development (i.e. Outlook Study).
  - System planning and operation (i.e. Integrated Resource Plan).
  - Fair allocation of benefits & costs (i.e. General Rate Case).
  - Regulatory modernization (i.e. Virtual Net-Metering).

# PRESENTATION OVERVIEW

- Introduction & Context.
- Virtual Net-Metering:
  - Overview.
  - Policy Options.
- Conclusion & Summary.

# INTRODUCTION & CONTEXT (1/2)

- NS will exceed 2020 GHG & RPS targets.  Solar electricity now viable option toward 2030 climate action & clean growth targets.
- SolarHomes program crucial to driving consumer-awareness and industry capacity development in residential market segment.
- Residential solar electricity generation could increase to meet ~1 - 3% of province's total annual electricity demand by 2030*.
- What factors could restrict residential solar electricity generation's role in NS's future clean, affordable & reliable electricity-mix?

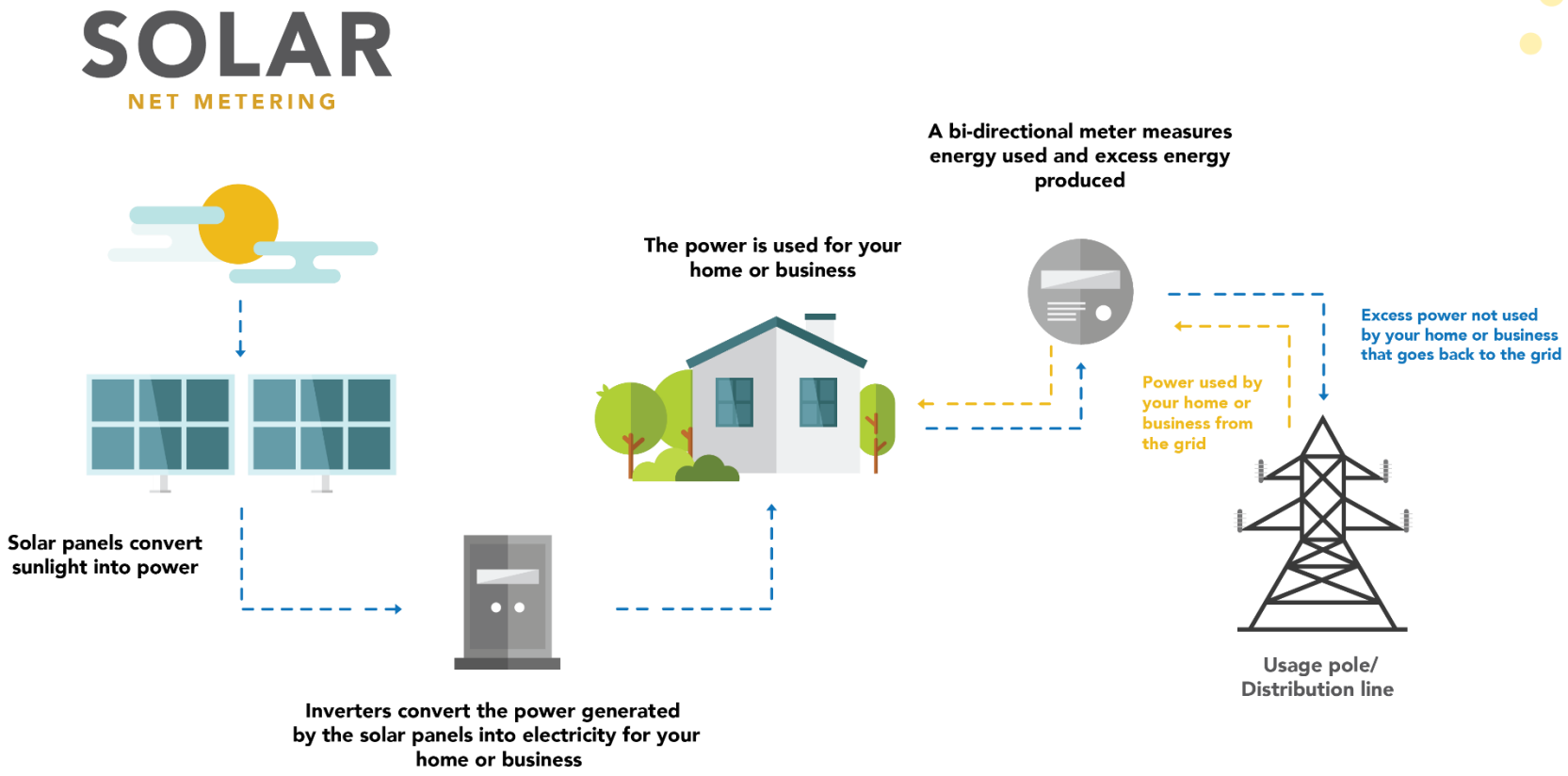
* Dunsky Energy Consulting (December, 2018) "Preliminary Results from Nova Scotia Residential Solar: Market Outlook, Supply Chain and Labour Force Study" commissioned by CanSIA forecasts 75 – 275 MW by 2030. Annual electricity demand in 2018 estimated at 11 TWh per year.

# INTRODUCTION & CONTEXT (2/2)

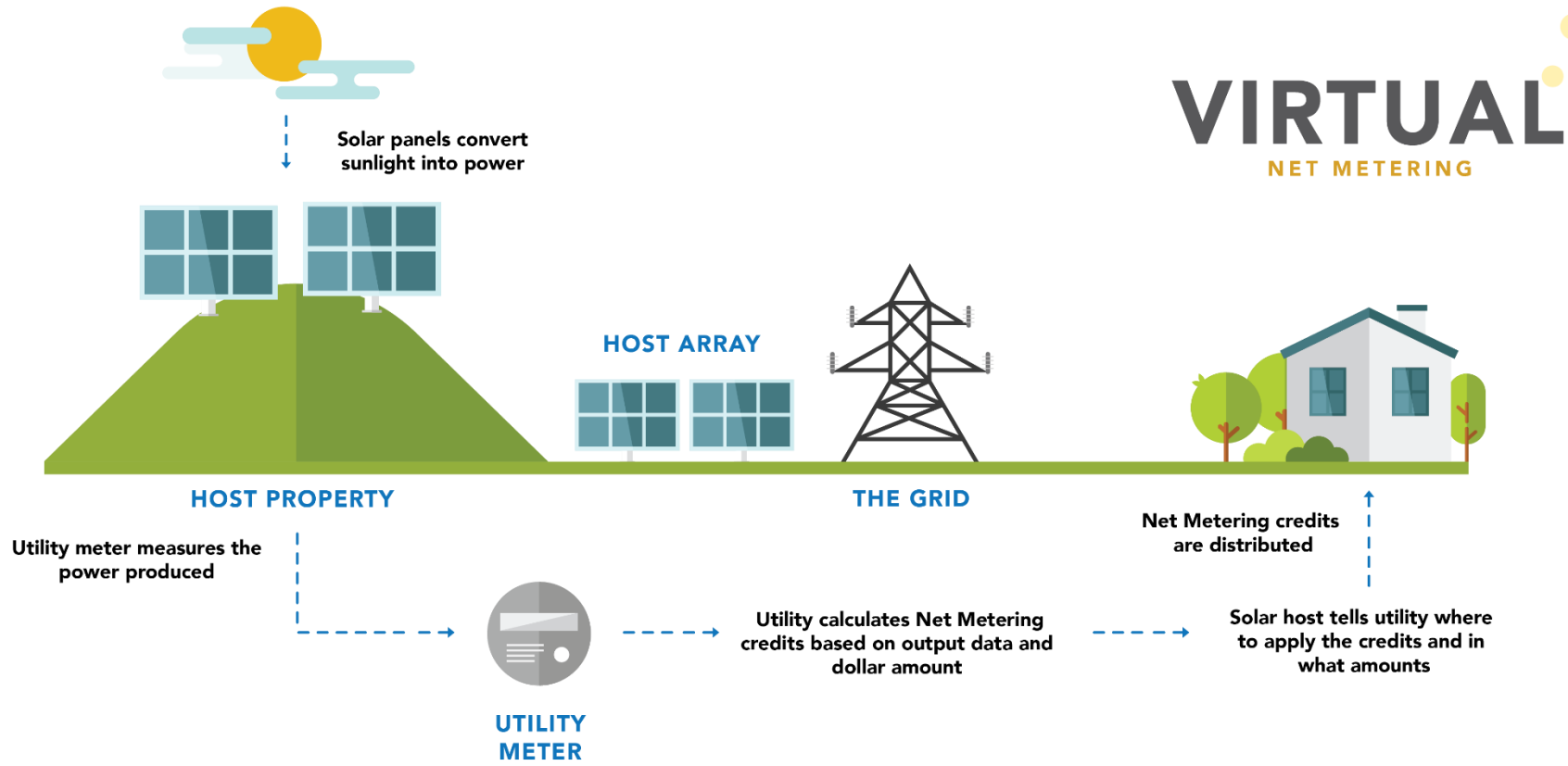
- The adoption of residential solar electricity generation can be limited by physical, economic and regulatory restrictions:
  - Siting (i.e. physical & legal).
  - Capital (i.e. access & cost).
  - Sizing (i.e. regulatory & economic).
  - Combination of some or all of the above.

- “Virtual Net-Metering” can enable residential electricity consumers (and other customer classes) to overcome these restrictions.

# VIRTUAL NET-METERING: OVERVIEW (1/3)



# VIRTUAL NET-METERING: OVERVIEW (2/3)



# VIRTUAL NET-METERING: OVERVIEW (3/3)

- There are several steps from “Traditional” to “Virtual” Net-Metering:

| | Structure | Electricity Customers (#) | Sites (#) | Meters (#) | Example |
|---|---|---|---|---|---|
| 1 | Traditional Net-Billing/-Metering | Single | Single | Single | House or Office. |
| 2 | Basic Meter Aggregation | Single | Single | Multiple | Farm or University Campus. |
| 3 | Multi-Site/Meter Aggregation | Single | Multiple | Multiple | Municipalities, Commercial Property Managers, Industrial etc. |
| 4 | Virtual Net-Billing/-Metering | Single or Multiple | Single or Multiple | Single or Multiple | Community of Electricity Customers. |

# VIRTUAL NET-METERING: POLICY OPTIONS

- Limited “Solar Gardens” in Canada to date (incl. New Westminster, Nelson) but many municipalities/utilities are exploring concept.

- Significant & diverse experience from US (i.e. CO, CA, MN) presents policy-makers with many design options to consider:
  - Participation & Ownership:
    - Multiple customer classes diversifies risk, lowers cost.
    - Private sector partnerships can assist risk-management.
  - Commercial Structure:
    - Credit-worthy counterparty & longer contract terms lowers cost.
    - Down-payment can limit participation from some customer classes.
  - Sizing:
    - Larger projects achieve economies-of-scale.
    - Maximize use of existing infrastructure.

# CONCLUSION & SUMMARY

- NS will exceed 2020 GHG & RPS targets.  Solar electricity now viable option toward 2030 climate action & clean growth targets.
- The adoption of residential solar electricity generation can be limited by siting, sizing and capital restrictions.
- “Virtual Net-Metering” (VNM) enables residential electricity consumers (& other customer classes) overcome these restrictions.
- Regulatory enhancements enabling VNM in NS are important step to enabling greater consumer participation in electricity supply.

# CONTACT DETAILS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