

How a few Changes to Ontario Legislation and Grid Regulations could Spur Local Economic Development, Stabilize Electricity Prices, and Reduce Energy Poverty

The Potential of Distributed Generation

Distributed generation includes the use of “behind the meter” energy storage, solar generation, and demand control technologies on customer’s sites and “front of the meter” solar, wind and energy storage capacity embedded in smart local community grids.

A [recent report](#) from Ontario’s Independent Electricity System Operator (IESO) showed that there is over 15 GW of cost-effective of distributed generation potential across the province that if deployed, could meet future demand for electricity over the next 10 years while at the same time phasing out natural gas generation.¹

As well as decarbonizing the Ontario grid, deployment of distributed generation would also stabilize local electricity prices, improve local grid resilience, provide good local jobs, and build community wealth. Distributed generation can be financed locally through renewable energy co-operatives and other local investment models.

So why are these resources not being deployed and why is the government of Ontario relying only on new large-scale corporately owned renewable capacity and ramping up natural gas generation to meet new demand?

The main culprits are regulatory barriers and a historic dependence on centralized generation. Ontario legislation currently prevents Local Distribution Companies (LDCs) from buying power from their customers. Ontario Energy Board (OEB) regulations do not allow these customers the choice of sharing or selling any excess power they generate among themselves or with other consumers. These regulations also prevent LDCs from properly valuing these distributed resources for the stability they bring to the grid, their value in reducing peak demand, and their de-carbonization potential.

A few changes to regulations and a legislative revision would remove the barriers to distributed generation. The changes would give citizens and LDCs the right to own, store, operate, sell, and share the power they generate. It would also allow LDCs to purchase and properly value distributed resources in their procurement processes.

The implications of these regulatory reforms would be huge:

- **Tenants in multi-unit residential buildings** with their own meters would be able to stabilize their energy costs by sharing in the benefits of solar power generated on their building. This could also mean that their building has better access to energy efficiency improvements.

¹ <https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/DER-Potential-Study>

- **Household, businesses and farmers** without suitable roofs or land could take advantage of the price stability of renewable energy
- **Local Distribution Companies (LDCs)** could use locally generated electricity and storage to meet new demand in constrained areas instead of building more expensive substations and lines
- **New local secure jobs** would be created and more wealth retained in local communities
- **Less investment in increasingly expensive central power plants and transmission lines** would lower electricity prices, stranded assets, and grid vulnerability
- **Local citizens** would have the opportunity to invest their savings in safe local energy production through community energy co-operatives

What Specific Changes are Needed?

OEB “net metering² regulations” should be modified so that they:

1. Allow the sharing of net metering credits in multi-residential buildings among all metered units in the building
2. Allow customers to share their net metering credits generated with other customers – so called “*virtual net metering*”

The legislative provisions governing LDC operation should be changed so that:

1. LDCs are allowed to purchase renewable power and storage capacity from locally owned generators, and
2. Local generators can sell renewable power to LDC customers through subscription or renewable energy certificates – so-called “*Community Solar*” and “*Power Purchase Agreements*”

Here are some examples of the benefits that these changes could bring.

Alleviating Energy Poverty in Low Income Housing

Consider Ontario’s many housing co-operatives. They mostly have little insulation and use baseboard electric heating. Each unit has its own electricity meter and bills are high. Grants are available to upgrade the efficiency of the building and switch to heat pumps, but the savings are often not enough to reach the savings threshold required for these grants. There is roof space for some net metered solar generation, but presently, the net metering credits can only be applied to the building’s common area electricity bills.

² Net metering regulations currently allow a customer with their own renewable generation system to feed any excess power into the grid in return for credits against their consumption at other times of the year.

With the proposed multi meter changes to net metering regulations:

- ✓ a larger solar system could be financed and installed through a local renewable energy co-operative,
- ✓ the savings could be shared among all tenants,
- ✓ the savings threshold for the grant could be reached,
- ✓ everyone's bill would be reduced and stabilized, and
- ✓ carbon emissions would be permanently reduced.

Helping LDCs meet demand in Constrained Areas

Many Local Distribution Companies are facing increasing demand in certain parts of their service area but are currently limited in their options to building new substations and wires or relying on voluntary customer conservation programs.

If Community Solar was allowed in Ontario, LDCs could buy power from renewable energy co-operatives and other local generators in these constrained areas. The generators would sell this power to the LDC itself or to subscribing customers throughout the LDC service area. The LDC would credit this amount to these customer's bills.

Allowing Buildings to become Net Zero without purchasing offsets

Businesses with high electricity demand and needing to meet net zero or Environmental Social Governance (ESG) objectives have few options in Ontario. For example, the National Capital Commission (NCC) LeBreton Flats development project in Ottawa is being designed as a net zero community. This means all facilities built there will generate some renewable energy on site themselves, but they will still need to offset the carbon in any grid electricity they buy. Right now, their only options to do this are to buy Renewable Energy Certificates or Carbon Offsets in addition to grid power.

If Power Purchase Agreements and Community Solar projects, facilities on the Flats could buy power from local renewable generators – stabilizing their electricity costs as well as foregoing the need to buy RECs or offsets. New demand could be met at low cost while customers unable to net meter on their own facility would be able to purchase renewable power at stable prices. Financing these projects through renewable energy coops would provide additional local benefits and options for citizen ownership and investment.

Conclusion

A few changes to Ontario's current legislation and regulations to encourage the deployment of distributed generation would stabilize local electricity prices, improve grid resilience, give customers more choice and generate local jobs and investment opportunities. At the same time it would help Ontario decarbonize the grid without stranding expensive new central generation capacity like Small Modular Reactors and Carbon Capture.