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Rural microFIT project proponents will continue to find it difficult to connect to Ontario's aging distribution network until Hydro One rolls out smart grid in these areas, contends the chief executive of WireIE.

Rob Barlow, CEO of [WireIE](#), explains that not only will rural microFIT projects remain unconnected, but efforts around electric vehicles and distributed energy storage are unlikely to come online for the same reason. Traditionally, utilities have been charged with keeping the lights on, but now they are being asked to connected a large number of distributed energy systems at points in the network that on one hand can't handle the demand and on the other negatively affect the overall power quality of the electrical grid, he adds.

The WireIE chief executive is referring to the rural distribution feeders and the 7% rule that Hydro One has adopted in terms of the amount of distributed generation it can add to a line. Barlow says that without smart grid these distributed generation projects won't get connected.

"What will happen is the alternative energy or the distributed generation will be built, but it'll just sit there until [the distribution network is] ready," he tells Canadian Green Tech in an interview, adding that [Hydro One](#) is unlikely to add this kind of capacity without making sure it won't negatively affect the electrical system.

This is directly tied to the quality of power that is on the electrical network. While most have to deal with demand-related power quality issues, a greater amount of distributed and variable

energy that is connected to the grid, particularly in rural areas with limited capacity, can have an equally damaging impact on the electricity system.

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"You have to be in sync with what's there already otherwise you can create imbalances," Barlow explains, noting that utilities are using capacitors in the network to try and get around this issue, but it's not an ideal solution. Without the right infrastructure from a farm for example all the way to the

distribution station, the project will remain unconnected.

“When you start talking long distances and distributed generation a long ways from the transmission network, it becomes more of an issue. So it’s a complex thing that has to be engineered correctly or [the distributed generation] will sit idle,” he says. “[The utility has] to make sure that that quality is of the highest level because you and I don’t expect anything less.”

The 7% rule, as it has become to be known, has been hotly contested for almost a year now. Hydro One argues that it is only following international standards, while the renewable sector, primarily the solar industry, contends that the utility is dragging its feet and could in fact raise the 7% to 15% at a minimum.

In a December 1 letter to microFIT stakeholders, [Sustainable Energy Technologies](#) CEO Michael Carten urges the solar industry to press forward with the issue and file an application with the [Ontario Energy Board](#) seeking an interim exemption to the System Distribution Code to mirror the [Federal Energy Regulatory Commission](#) (FERC) process.

“The FERC process says that all projects should be connected until total projects on the line exceed 15% of peak load. Penetrations in excess of this level would be based on engineering judgments,” states the letter.

