Electrical System Simulation

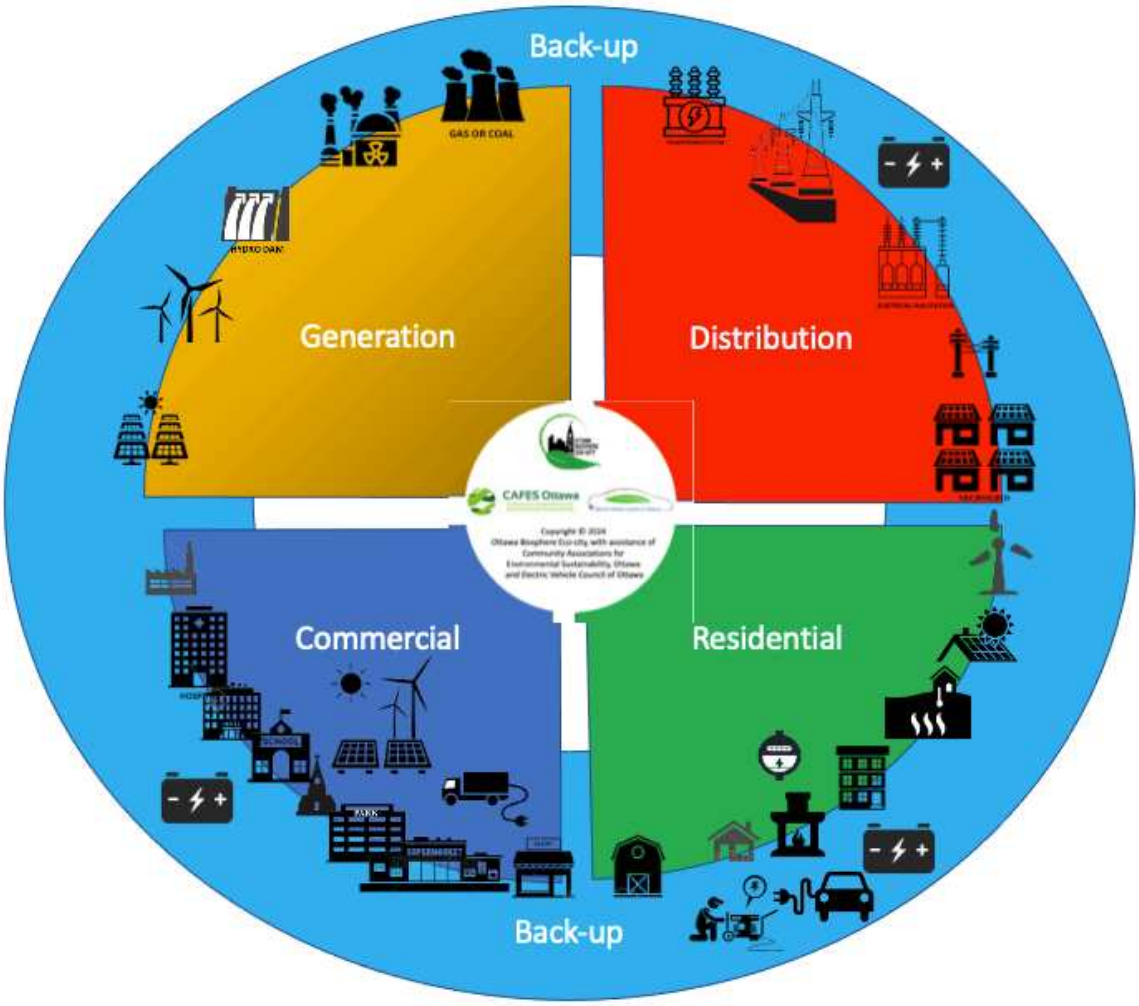
By Ottawa Biosphere Eco-city – http://obec-evbo.ca

Change is coming to the grid in Ontario. The question is whether we are able to develop consensus solutions with our neighbours to questions related to new technology, its use and its safety.

Electrical System Simulation is a way to structure a discussion among neighbours to explore new technologies being introduced to the grid in Ontario.

The Simulation Board

The simulation is played on a board which represents the supply and demand side of the electrical grid with sectors for generation, distribution and commercial and residential demand. Also, as discussion starters, there are icons on the board that represent existing infrastructure and technologies already in use in our community.



Participants in the simulation discussion sit around a table with the simulation board in the centre and lay out cards representing various technology solutions on the board to construct a model of the electrical grid that they feel meets their needs.

Required to play the game:

- Tables so that the participants can be seated at, say, 5 or 6 to a table.
- A game board and set of technology cards for each table.
- Paper, post-it notes, marker pens and blank cards for each table. These are there so that anything missed in the game can be added by the participants – say technology solutions missed, connections to be described, improvements to the game can be recorded.
- A facilitator for each table to answer questions (eg. What is this technology?) or to help with process issues (eg. What do we do next?).

Rules:

1. All opinions are correct. We proceed by consensus. If someone wants something included, then the group will figure out how it fits.
2. All opinions are correct. We will only be successful if we bring everyone along with us.
3. All opinions are correct and will be respected. For example, if a participant wishes to include a technology, that technology *must* be included in the model: another participant is not allowed to say “We can’t use that card!”

Steps to play the simulation:

1. Participants are introduced (briefly) to the board and the technology cards. (5 minutes)
2. Participants take their seats around one of the several tables with game boards and technology cards that have been set up in the room. On the tables are also paper, pens and blank cards.
3. The technology cards are divided up so that each participant has three or four cards.
4. Going around that table, each participant introduces their cards to the other participants at the table (10 minutes)
5. Going around the table each participant lays a card at an appropriate place on the game board until all the cards are laid out in an arrangement that reflects a consensus of group opinion.
    a. In this process *all answers are correct*.
    b. Participants can choose not to lay a card on the table, and if so, it goes into a reserve pile, from which other participants can choose to pick up the card and play it.
    c. You can draw lines and arrows on the board to show connections and relationships (post-it notes also may be useful). Single direction arrows or multi-directional arrows or arrows that point in both directions are useful here.
6. This process continues until all the cards are laid out and the group feels that the grid being modeled would meet their needs. (approximately 45 minutes to 1 hour)

Unpacking the simulation:

The unpacking activity has two steps: first, explaining the table's model to participants from other tables and secondly, summarizing all the models and identifying next steps.

1. E**xplaining your table's conclusions to participants from other tables**. In this step people move from table to table and the table facilitator explains the model created. (approximately 5 minutes per table)
2. **Summary and Next Steps.**
    a. Conclusions are invited from the whole group about what they have concluded about the electrical grid and their needs and expectations. From each table we would like to know
        i. What technologies are part of their system model
        ii. Which of their needs as electricity consumers these technologies meet
        iii. What risks or cautions their table identified related to these technologies.
    b. Any next steps are identified (actions that need to be taken to ensure action is taken based on the conclusions drawn.
    c. Volunteers are invited to be part of a small Next Steps Group to carry out the group's next steps.

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