

## Meeting with MOE/Hydro One – Special Advisor for High Speed Rail

June 16, 2016

### Meeting Notes

- David's intro
  - Willingness to accommodate HSR along corridor
  - Upgrading this line in the future? Can we piggy back on easements?

Mike Penstone

- Establishing adjacent to corridor
- Easements
  - Payments made to farmers – will get back to us
  - Easements are specific – for construction of transmission infrastructure
  - Would have to amend the easements with land owners
    - Typically it depends if a double track would work
    - If you look at our easements – in some parts there is the space; however, in the way that the system has been planned they look decades into the future and prepare space for that
    - Several examples where property was acquired 40 years ago, and only now constructing on it
    - Payments were made a number of years ago, and it was settled
      - Need to figure out how many land owners we have in the corridor, and do one off negotiations
  - Just because it looks empty, doesn't mean there aren't plans for it
  - Will look at ROWs and see if secondary uses can be accommodated
- Considerations
  - Real Estate
  - Physics (magnetic and electric effects) – measures have to be taken to address this, although it can be engineered
- Maps description
  - Transmission system in SW made up of 3 different types of transmission
    - 500 kv is the major “400 series” transmission – brings power to regional areas
    - 230 – transports energy to regions and supplies local areas
      - Same as what you have on Finch corridor
      - 150 feet wide in corridor from KW to London
      - Typically corridors for this level is 150 feet to provide for protection, so corridor is mostly “spoken for” for energy purposes
      - Largely in farmland, so there is potential opportunity
        - Easements agreements would have to be more substantive for farmers for rail, because it cuts their land vs. transmission line

which doesn't really interrupt land use because farmers can still use the land underneath

- Gary Schnieder would be helpful – knows about land acquisition, had to do this for an extension - future meeting\* had to expand an existing corridor, had to go back to the landowners so a similar experience to what we would be asking for HSR – policies to incent landowners, did have to buy the entire property for some – 180 km
- EA process consultation with First Nations – did go through this exercise as well, an the outcome of that is that this project is jointly owned by Hydro One and 2 First Nations and they receive ongoing revenue stream – commercial partnership, so they bought a share, government backstopping the finances – Aboriginal Financing Program\*
- Engineering phase
  - Our towers and lines could be relocated to build HSR – would be open to that, as long as there is place to move the circuits
- When dealing with landowners, we want to you to do something about that hydro tower – that could come up – there are ways to address this
- Drawdown from trains would increase the load (?)
- Have you ever thought about burying transmission lines? Underground conduits
  - Hydro One has done this to accommodate transit, had to do this in Waterloo for the LRT – did bury the lowest voltage lines
  - Has been done, however it is usually 7 times more expensive to bury something, and the conductor is very different – in the ground, wires are heavily insulated, have to use many more conductors
  - 1.5 km in KW - \$20 million 115kv voltage – it is an option if its in the way for a very short difference
- ROW for HSR would need to consider energy requirements, so would need to plan for another transmission system as well
- Long term energy plan kicking off soon – so electrification from a system perspective needs to be considered – the timing is good that we are talking to Hydro One and MOE now
  - Have to plan for impacts on the electrical infrastructure
  - Part of Long term energy plan consultations will be talking to many stakeholders including us, municipalities etc.
- HSR Switching stations
  - Typically these stations are underneath the lines

- You need substations for wires for trains – yes we need this for HSR
  - The higher speed the increase you need in power
- What are the power demands for HSR? If we let Hydro One know they would answer this question for his\*\* and what is the width of the high speed line \*\* - then could provide best advance in terms of how HSR could be serves and the real estate needs\* How high is HSR when elevated??
  - Future meeting
  - Bring in Gary, VP Real Estate, to get sense of real estate needs
- Any technical answers from hydro one need in next month
- On Maps – suggest that you overlay the First Nations reserves as well
  - Check to see where reserves are as well\*
- **Next Steps**
  - Need for future meetings, answers - MOE as point of contact, or we can work through Hydro One
  - Draft section on energy needs will be reviewed by Hydro One\*\*\* Commitment
  - Will inform of us the mitigating measures and real estate needs
  - The sooner that Hydro One can sit down with technical staff for the report the better
    - Physically this is what it would look like, general electrical facilities – would we really get into this detail? NO but we need to have some general info, which we can share with Hydro One based on systems in other jurisdictions → will work with Hydro one on the conceptual considerations
    - Feeding into MOEs LTEP