

1 Q. [Mel Dean Evidence, page 12, lines 13-16]

2 Please confirm that wind turbines are required to shut down during periods of
3 excessive winds such as those that can be experienced in Newfoundland which has a
4 high annual mean wind speed.

5 A. [The wind turbines used at both the St. Lawrence and the Fermeuse wind farms are
6 three megawatt Vesta model number V90.¹ The wind speed beyond which a wind
7 turbine is not allowed to deliver power is known as the cut-out speed². According to
8 the specifications for the Vesta V90 – 3.0 MW, the cut-out speed is 25 meters per
9 second or 90 kilometers per hour³. Thus, it is confirmed that the wind turbines at St.
10 Lawrence and Fermeuse will be required to shut down if the wind is in excess of 90
11 kilometers per hour.

12
13 If all wind farms are located in the same location, then they may all be forced to shut
14 down at the same time. By locating wind farms at different areas within the Province,
15 the probability of shutting them all down at the same time is greatly reduced. This
16 may account for the existing wind farms located on the Island always producing

¹ Reference: Newfoundland and Labrador Hydro fact sheet, page 2 of 2,
<https://www.google.ca/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&uact=8&ved=OCB0QFjAA&url=https%3A%2F%2Fwww.nlh.nl.ca%2FHydroWeb%2FNLHydroWeb.nsf%2F0%2FFCE9CF2E6CFC7772A3257648006A5106%2F%24File%2FFactSheetWindPower.pdf&ei=eoCSVdydBMvvggSzoYDQCw&usg=AFQjCN-Gh1yfy8KLoZMaQUZ8XgXe2gozadg&bvm=bv.96783405.d.eXY>

² Reference: Iowa Energy Center
<http://www.google.ca/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=3&cad=rja&uact=8&ved=0CCUQFjAC&url=http%3A%2F%2Fwww.iowaenergycenter.org%2Fwind-energy-manual%2Fwind-energy-systems%2Foperating-characteristics%2F&ei=2oiSVcz9F4yANtDcgpAN&usg=AFQjCNHQWIYNy7sA06Evoh7k9HWNzXC81w&bvm=bv.96783405.d.eXY>

³ Reference: Vesta V90-3.0 MW specification sheet, page 14 of 16,
http://www.google.ca/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=2&cad=rja&uact=8&ved=0CCAQFjAB&url=http%3A%2F%2Fwww.vestas.com%2FFiles%2FFiler%2FEN%2FBrochures%2FVestas_V_90-3MW-11-2009-EN.pdf&ei=pYqSVae5CY7_gwT8yYKADw&usg=AFQjCNGOHJd3_DkCi-nmrwiv9vfZ_zxPJw&bvm=bv.96783405.d.eXY

- 1 power at the time of the annual system peak (see Mel Dean Evidence, June 4, 2015,
- 2 page 15, lines 6-17).