



NorthernLights Transmission Project Projects Converging on the Lower Columbia

October 3, 2008



NorthernLights Intertie Project

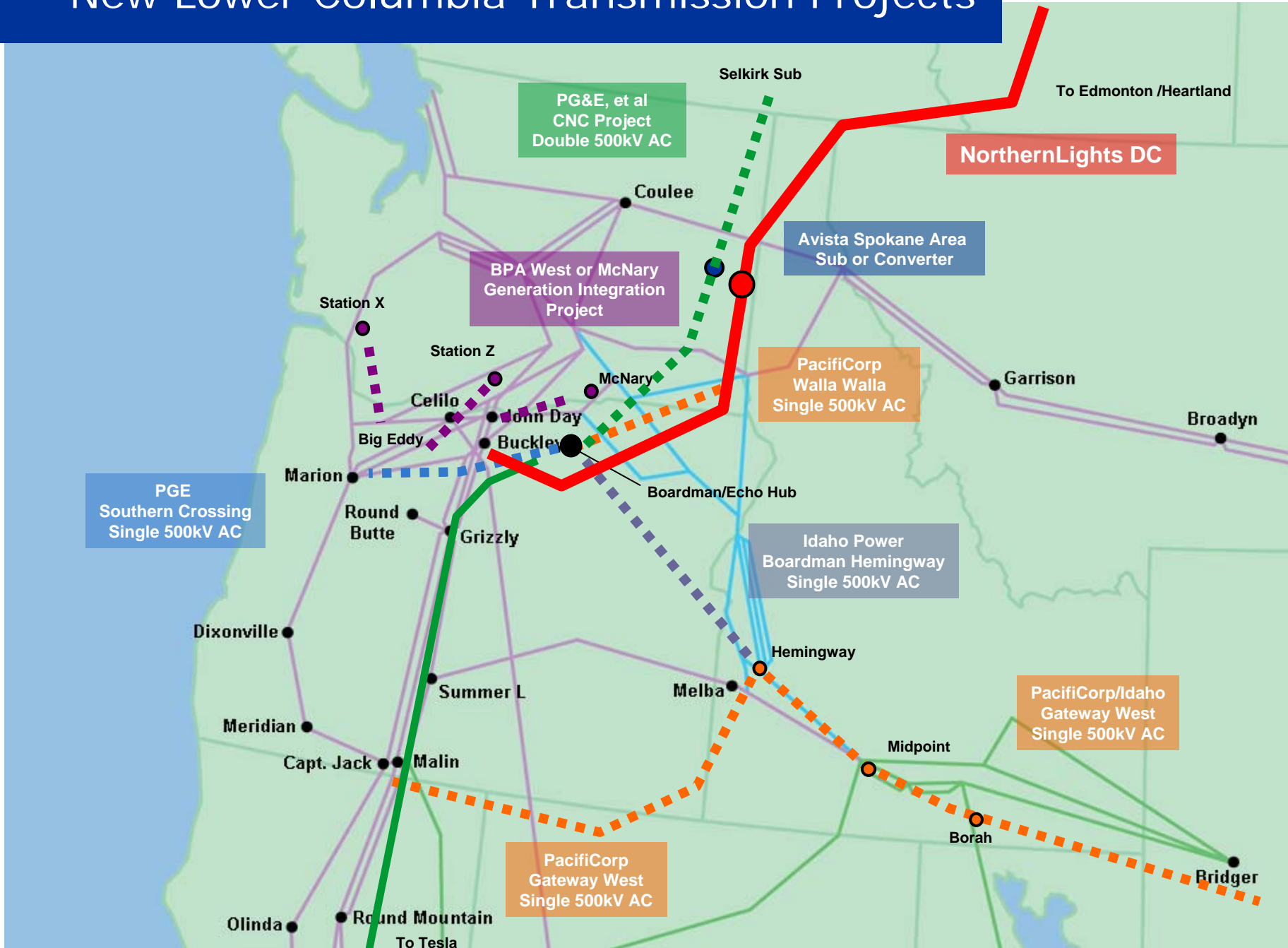


- Bi-directional HVDC transmission line from Edmonton - Heartland area to Buckley, Oregon
- 3000 MW design capacity
- 956 miles, eastern side of Alberta
- \$2.2 billion ('08\$), 2000 MW initial capacity
- Merchant bi-directional intertie line
- 6 year to permit and build

Project web site: <http://www.transcanada.com/company/northernlights.html>



New Lower Columbia Transmission Projects



Project Sponsor	Proposed Project Name	Online Date (est.)	Voltage	Capacity (MW)
BPA	West of McNary Integration Proj McNary to John Day & Big Eddy to Station z	2011-2013	SC 500kv AC	1,500
Idaho Power	Hemingway, Idaho to Boardman, OR (Loop into Echo is an option)	2012-2013?	SC 500kv AC	1,500
PG&E	Canada-NW – Calif (CNC) DC SF to Maupin or Echo, OR AC to Selkirk, BC	2015-2016	Double 500kv AC & HV DC	3,000
PacifiCorp	Hemingway, Idaho to Capt. Jack, OR (part of Gateway West)	2014-2016	SC 500kv AC	1,500
TransCanada	NorthernLights (Heartland, Alberta to Buckley, OR)	2015	500kv HV DC	2,000 Oper 3,000 const
PGE	Southern Crossing (Boardman to Ollalie, OR; Ollalie to Bethel, OR)	2013-2015	SC or DC 500kv AC	2,000
PacifiCorp	Walla Walla, WA to McNary, OR to Echo, OR	2012+?	SC 230kv AC	400
Avista Corp	Interconnect w/PG&E Selkirk line – Spokane, WA upgrades. Coyote generation to Echo	2015-2016	500kv Sub & 230kv upgrades	500
BPA	I-5 Corridor reinforcement (Castle Rock, WA to Troutdale, OR)	2013-2015	SC 500kv AC	1,500