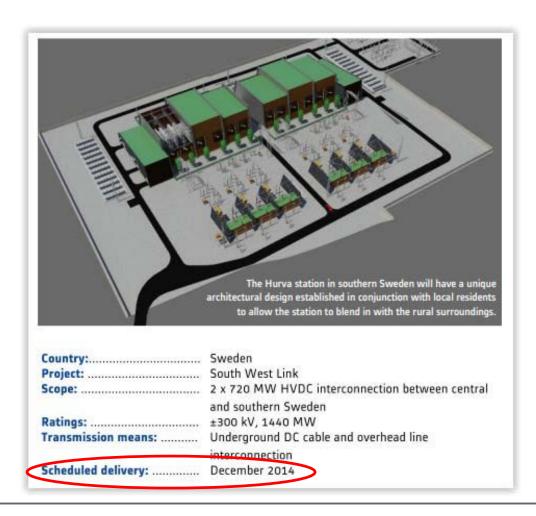
# Transmission Link Project GE Global Performance

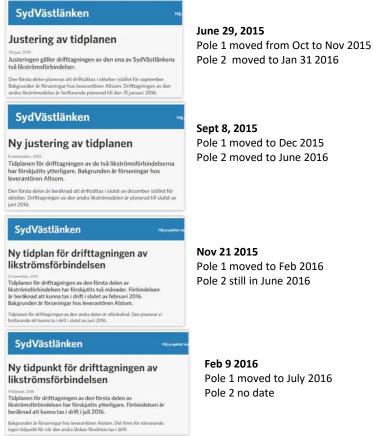




# South West Link, Sweden

## 2 x 720MW HVdc Link Between Central & Southern Sweden

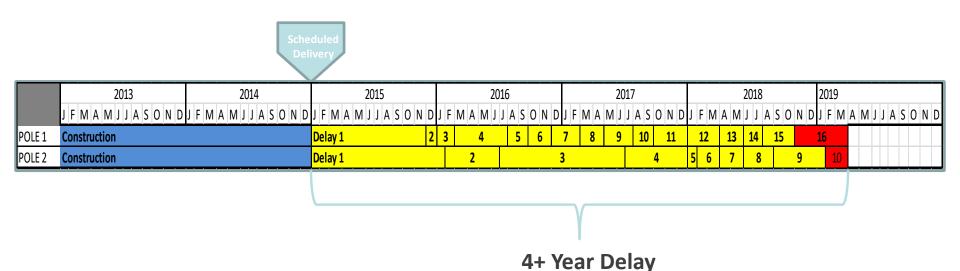




#### Trend continues......



## South West Link, Sweden

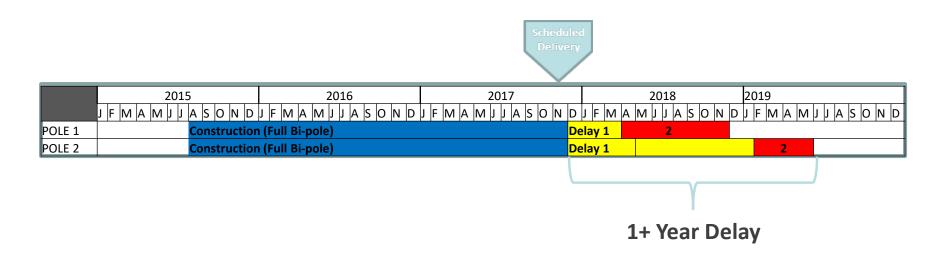


## South West Link 4+ Years Behind Schedule

- Original date for operation was Dec 2014
- Currently a delay of more than 3 years
- GE pushed the scheduled forward in small step 1 to 4 months at a time
- Delays are a result of consistent problems with technical solutions from GE



## **Labrador-Island Transmission Link**



### **Labrador-Island Transmission Link**

- GE continues to miss delivery dates, extending the schedule 3-5 months each time
- GE is in a loss position on this project and is using schedule delays and claims to increase contract value
- Nalcor has provided resources to help GE finish but is losing confidence that GE has the ability to complete Bi-pole



# **Other Projects**

Project	Status
Konti Skan Denmark, Sweden	<ul> <li>Delivered by GE Grid in 2010</li> <li>Replaced controls as soon as warranty expired in 2017</li> <li>ABB selected in 2017 to supply new controls; scheduled delivery 2019</li> </ul>
Champa-Kurukshetra India	<ul> <li>GE delivered Pole 1 in March 2017 &amp; Pole 2 in October 2017</li> <li>Bipole not fully functional – regular trips</li> <li>Replacing failed hardware components of their P&amp;C system</li> </ul>
Rio Maderia Brazil	<ul> <li>Two parallel lines, Rio 1 &amp; 2</li> <li>ABB delivered Rio 1 in 2014</li> <li>GE delivered Rio 2 in 2016</li> <li>Ongoing issues reported</li> </ul>

Note: Information sourced through industry contacts and online sources, not directly from operators



# Champa-Kurukshetra, India

- Planned project delivery was 33 months, actual
   ??
- Dynamic commissioning was 6-7 months late
- Significant number of outages in first year equipment and P&C software
  - Large number of outages related to lane tracking and change over
- Operating for last 3 months at 99% reliability
- Oversight at PES in Stafford was key to advancing software



# DolWin3, Germany

- Planned project construction was 5 years, original delivery was Sept 2017
- Challenge with GE was related to P&C software from Stafford
- Due to delays with P&C software, TenneT advanced Plan B with alternate vendor while working through issues with GE
- Sept 2018, DolWin3 transferred 700MW for 10 days, followed by trial operations
- The system is now in operation with little issue
- 3<sup>rd</sup> party oversight at PES in Stafford was key to advancing software



# Rio Maderia, Brazil

- Two parallel lines, Rio 1 & 2
- ABB delivered Rio 1 in 2014
- GE delivered Rio 2 in 2016, 2 years late
- Many issues with GE system during commissioning resulting in numerous revisions of software
  - Issues with trips and equipment failures
- Currently Rio 1 & 2 are operating independently
  - Working to integrate both systems under a master control

