ED5-PVH Project Update

Western’s TIP-financed project to enhance the Parker-Davis Project transmission system South of Phoenix

December 2012
ED5-Palo Verde Hub Project
Project Description

The major elements include:

- Acquire transmission rights on Southeast Valley Project’s 500-kilovolt Hassayampa-to-Duke/Test Track line.

- Convert 230-kV switchyard at Test Track Substation from a “ring bus” configuration to a “breaker-and-one-half bus” configuration with new bays.

- Construction of a new 230-kV ED5-Test Track Line; this line is under built on the SEV 500-kV Pinal Central-Duke Line, and double circuited with Western’s CAG-EMP-ED5 115-kV Line.

- Upgrade the ED5 115-kV Tap Switchyard to 230-kV standards and install a new 230/115 kV transformer.
Project Accomplishments

- Project Approved and Funded          September 14, 2011
- Project Documents and Agreements    October 2011
  - SEV Project Rights Assignment Agreements
  - Transmission Line Attachment Agreement
- Funds drawn from Treasury           Nov 11/Apr 12/Jul 12
- Materials and Equipment Awards      
  - 230/115 kV Transformer – ED5 Sub  July 2012
  - 230-kV Breakers - ED5 and TTT Subs August 2012
  - Instrument Transformers – ED5 Sub  September 2012
- Construction Contract Awards       
  - ED5-Thornton Road Line             September 2012
  - ED-5 Substation Upgrade            November 2012
Project Timeline

- Construction begins: Fall 2012
- Materials and Equipment Awards:
  - Instrument Transformers – TTT Sub: January 2013
- Construction Contract Awards:
  - Test Track Substation Expansion: April 2013
- Estimated Construction Completion:
  - 230-kV ED5-Thornton Road Line: June 2013
  - 230-kV Thornton Road-Test Track Line: January 2014
  - ED-5 Substation Upgrade: April 2014
  - SEV Project – PV-Duke Line and Yards: May 2014
  - Test Track Substation Expansion: July 2014
  - System Testing: October 2014
  - System In-Service: January 1, 2015
## Project Cost Estimate

<table>
<thead>
<tr>
<th>Project Construction Item</th>
<th>Estimated costs (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Transmission Rights (SEV Project)</td>
<td>$ 23.5</td>
</tr>
<tr>
<td>New 230-kV Transmission Line (ED5-Test Track)</td>
<td>$ 25.1</td>
</tr>
<tr>
<td>Upgrades at substations (ED5 &amp; Test Track)</td>
<td>$ 28.0</td>
</tr>
<tr>
<td>Project Management and Construction Overhead</td>
<td>$ 1.7</td>
</tr>
<tr>
<td>Construction Project Base Cost</td>
<td>$ 78.3</td>
</tr>
<tr>
<td>Management Reserve</td>
<td>$ 3.2</td>
</tr>
<tr>
<td>Financing and Indirect Costs</td>
<td>$ 3.6</td>
</tr>
<tr>
<td><strong>Total Estimated Project Costs</strong></td>
<td><strong>$85.1</strong></td>
</tr>
</tbody>
</table>
Starting in January 2015, Western customers can anticipate:

- Surplus transmission capacity available
- Available transmission capacity will be posted on OASIS
- Long-term Firm Transmission Service to begin
## Points of Contact

<table>
<thead>
<tr>
<th>Category</th>
<th>Contact Name</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td>Todd Rhoades</td>
<td>602-605-2313</td>
</tr>
<tr>
<td>Environmental Planning &amp; Technical Studies</td>
<td>Linda Hughes</td>
<td>602-605-2524</td>
</tr>
<tr>
<td>Transmission Marketability</td>
<td>Josh Johnston</td>
<td>602-605-2634</td>
</tr>
<tr>
<td>Marketability</td>
<td>John Steward</td>
<td>602-605-2774</td>
</tr>
</tbody>
</table>

Additional information is available online at: http://ww2.wapa.gov/sites/western/recovery/project/Pages/ED5PVH.aspx