PJM Generator Interconnection Request

Feasibility / Impact Study Report

Queue #R15

Adkins 345 kV
(Darby Generating Units)

9 MW
(Increase in existing capacity)

March 2007

DOCS#: 411030

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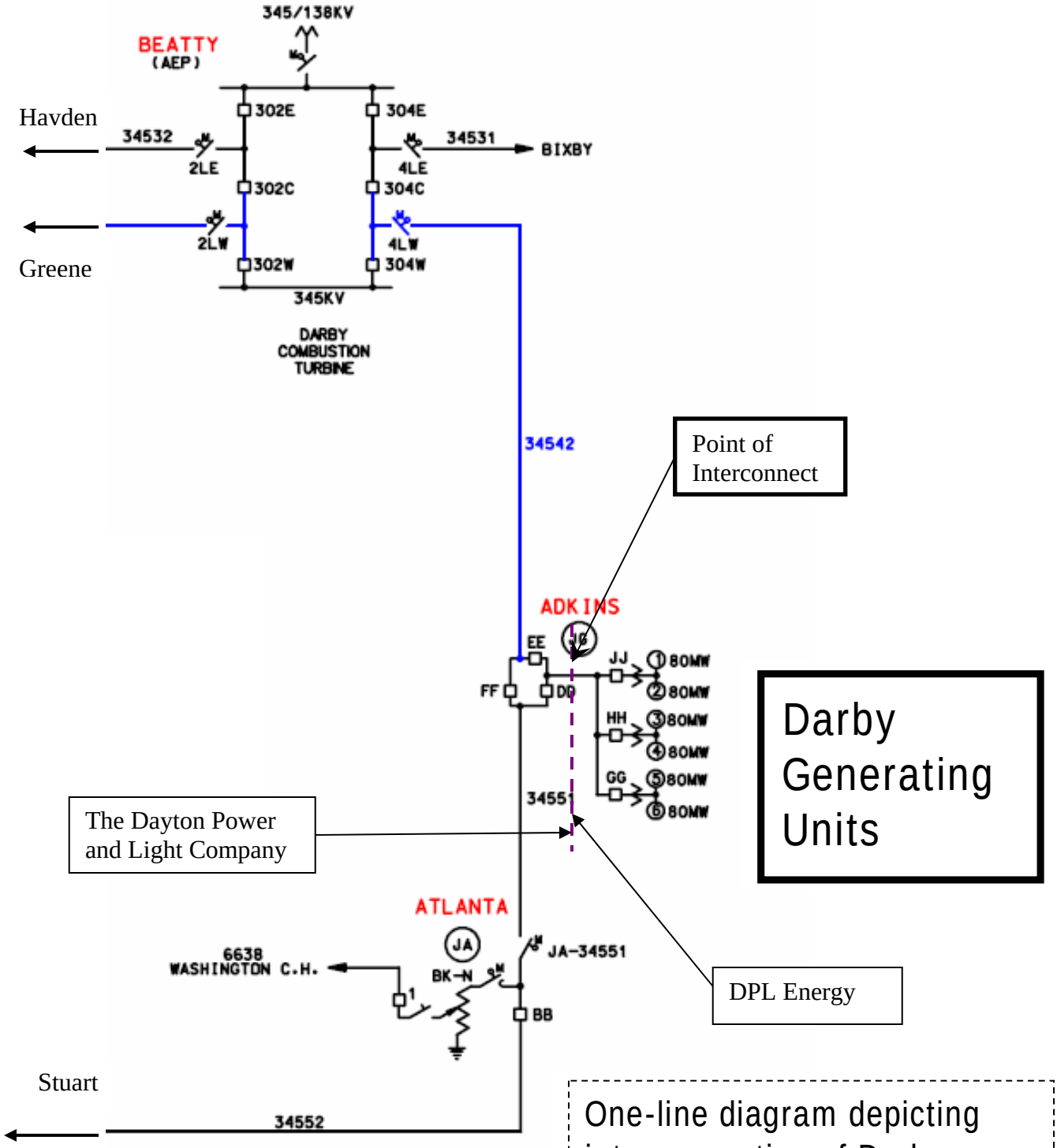
General

DPL Energy Inc. has requested to interconnect an additional 9 MWs of Generation Capacity at Adkins 345 kV bus. This additional generation is an increase to the Darby Generating Station Units #1, #3, #5, and #6 output capacity. The additional 9 MW of generation capacity is divided as follows: Darby 1 (3 MW increase); Darby 3 (1 MW increase); Darby 5 (3 MW increase); Darby 6 (2 MW increase). The increased capacity of each unit is already available and has been demonstrated. The Darby Generating Station is located in Mt. Sterling, Ohio. PJM has assigned this project queue #R15 Adkins 345 kV.

Direct Connection

The Darby Generating Units are connected to Adkins 345 kV bus as shown on the following one-line diagram (next page). No additional facilities are required.

SINGLE-LINE DIAGRAM
R15 Adkins 345 kV (Darby Generating Units)



Network Impacts

The #R15 project was studied as a 9 MW increase in Capacity to the existing generating facility at Adkins 345 kV. Project #R15 was evaluated for compliance with reliability criteria for summer peak conditions in 2011. Potential network impacts were as follows:

Generator Deliverability
No problems were identified

Multiple Facility Contingency
No problems were identified

Contribution to Previously Identified Overloads
None

New System Reinforcements
None

Contribution to Previously Identified System Reinforcements
None

Short Circuit
Not required. There is no change to the electrical characteristics of the units or the GSU.

Stability
Not required as the increase in capacity request is for less than 30 MW.