# PJM Generator Interconnection Request

# Feasibility / Impact Study Report

## Queue #Q14
## Hegewisch 12kV
## 6.6 MW

**September 2006**

**Updated 6/9/10**

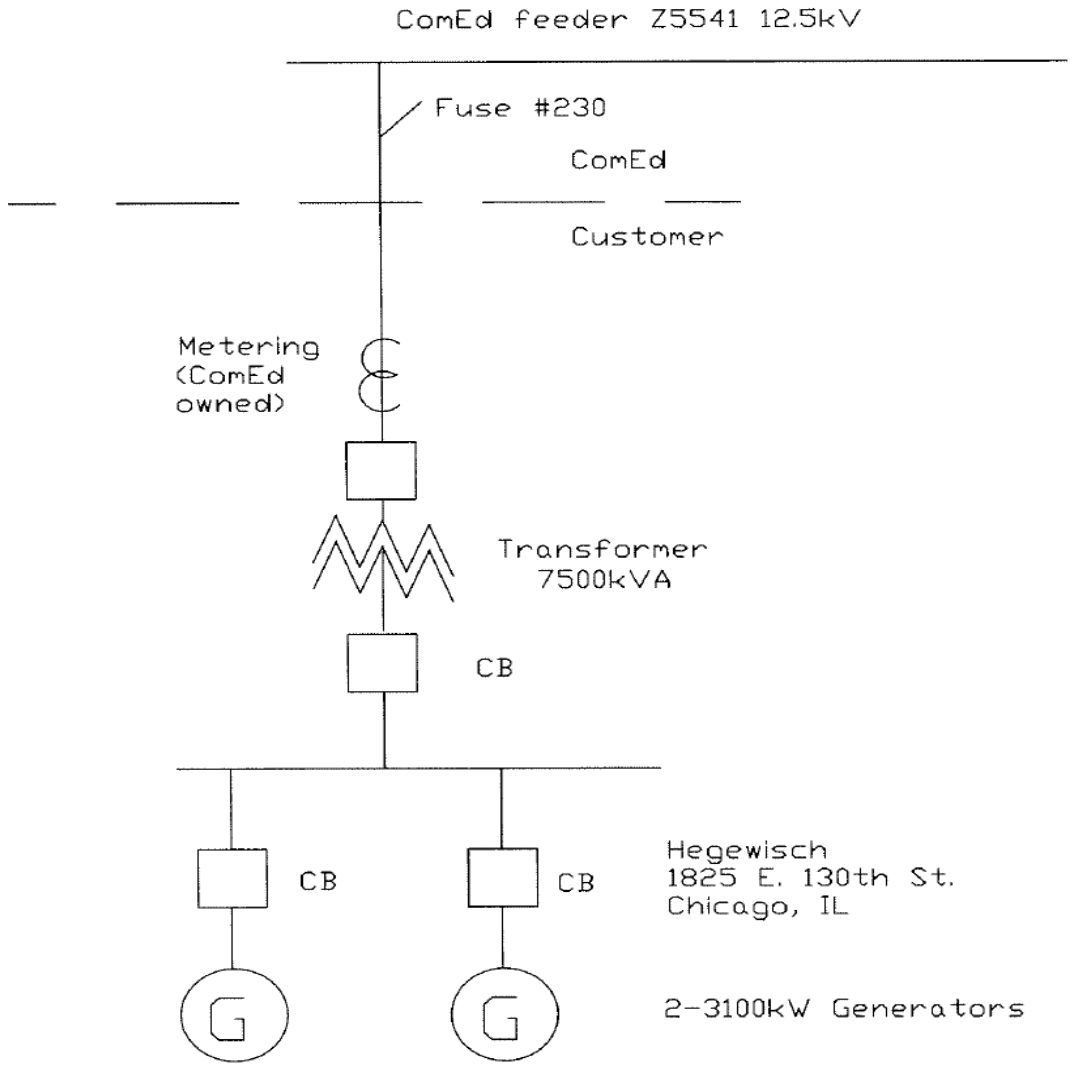
## Q14 Hegewisch 12kV Feasibility / Impact Study Report

### General

Q14 Hegewisch 12kV is a WM Illinois Renewable Energy, LLC 6.6 MW request for Capacity Interconnection Rights for existing generation located at 1825 E. 130th Street in Chicago, Cook County, IL. Q14, referred to as the "CID Project" in this report, is presently connected to the ComEd distribution system and operating as a QF under the name of CID Landfill. Q14 consists of two 3.3 MW, simple cycle, engine - generators fueled by landfill gas (methane). The facility has been in operation for more than 15 years.

### Direct Connection

The CID project is presently connected to the ComEd distribution system via the 12.5 kV feeder Z5541 at the Hegewisch TSS55 Substation.



PJM has studied this project for impacts to the transmission system (see below).

## Scope of Metering Work

The Kankakee Project assumes responsibility for all costs of design and construction of all Communication, Telemetry, SCADA, and Metering per the ComEd and PJM requirements below.

### Revenue Metering and SCADA Requirements

**For PJM**: Interconnection Customer will be required to install equipment necessary to provide Revenue Metering (KWH, KVARH) and real time data (KW, KVAR) for Interconnection Customer's generating Resource. See PJM Manuals M-01 and M-14D, and PJM Tariff Sections 24.1 and 24.2.

**For ComEd**: Interconnection Customer will be required to install equipment necessary to provide bi-directional Revenue Metering (KWH, KVARH) and real time data (KW, KVAR, circuit breaker status, and 12 kV voltage) for Interconnection Customer's generating Resource. See ComEd Applicable Standards available on the PJM website – "Exelon Energy Delivery Interconnection Guidelines Generators Greater than 2 MVA and Less than 20 MVA". An RTU needs to be installed per ComEd standards.

http://www.exeloncorp.com/ourcompanies/comed/comedbiz/energy_rates/our_rates_and_prices.htm

### ComEd's Cost to Install the Required Metering

The total Order of Magnitude estimated cost for ComEd's installation is $**101,600.** The lead-time required for installation of the metering is approximately 12 months.

**Project Name: Q14**
**Developer: Waste Management**
**Station:CID Project**

| Item Description | Material | Labor | Total |
|---|---|---|---|
| Telemetry and SCADA | $ 24,400 | $ 36,600 | $ 61,000 |
| Metering | $ 1,000 | $ 1,600 | $ 2,600 |
| Engineering and Engineering review | | $ 20,000 | $ 20,000 |
| Field testing and modification review | | $ 18,000 | $ 18,000 |
| Metering contract requires $50/month maint. | | | $ - |
| Customer to supply dedicated phone line. | | | $ - |
| **Material Subtotal** | **$ 25,400** | | |
| | | | |
| **Labor Subtotal** | | **$ 76,200** | |
| | | | |
| **Total** | | | **$ 101,600** |

**Loss Factor Charge:**

For this project, Q14, the Loss Factor was calculated to be 1.31%. Therefore under current ComEd system configuration there would be charges applied to this generator for distribution losses. The Loss Factor is subject to periodic update as system configuration change in the future.

**Notes:**

1. Optional CID Project scope of work: Interconnection Customer may choose to design, procure and install bi-directional revenue metering and SCADA compatible with ComEd requirements. The design, procurement and installation would be subject to approval by ComEd.
2. CID Project is required to provide the required class A phone lines for metering and communication requirements. Communication to be continuously monitored by SCADA.
3. Should the CID Project choose to communicate all the required data to PJM via the internet, arrangement must be made to assure that PJM will transmit such data to ComEd according to existing protocol.

## Network Impacts

The #Q14 project was studied as an injection of 6.6 MW (Capacity) into the Hegewisch TSS 55 substation. Project #Q14 was evaluated for compliance with PJM reliability criteria for summer peak conditions in 2011. If the CID Project increases the capability of the plant to greater than 6.2 MW then the customer (Waste Management Corporation) must re-enter the PJM Queue for re-evaluation. 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

**Short Circuit**
No problem identified.

## New System Reinforcements

None identified.

#Q14 - Hegewisch 12kV

# Generation Interconnection

**This analysis was completed to assess the reliability impact for a new generator interconnecting to the PJM System as a Capacity Resource.**

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### Contribution to Previously Identified Overloads

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## New System Reinforcements

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