**Building & Occupant Overview**

The Institute for Genomic Biology, IGB, (previously known as Post Genomic Institute) is a building dedicated to all types of research, including chemical and biological research involving food, crops and animals. The building opened in 2007 and is a $75 million state-of-the-art facility. There are five 100% outside air units that serve labs and animal rooms and two return air units for office spaces. Building heat is provided by six hot water heat exchangers. There are two for perimeter radiation, two for reheat, and two for the preheat/heat recovery system. There is a heat exchanger providing building process cooling with city water as a back-up. The building control system is the Andover Netcontroller II. The facility’s total metered energy during FY12 was 66,185 MMBTU.

**Post RCx Energy Use Intensity (EUI) & Cost Index (ECI)**

<table>
<thead>
<tr>
<th>E.U.I.</th>
<th>E.C.I. #1</th>
<th>E.C.I. #2*</th>
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<tr>
<td>301 kBTU / Sq.Ft.</td>
<td>$ — /Sq.Ft.</td>
<td>$ — / person</td>
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*~ 500 PEOPLE OCCUPY BUILDING ON A GIVEN DAY

**Retrocommissioning Specifics & Results**

The air handling units (AHUs) providing air conditioning were maintaining space conditions in offices and labs 24/7/365. The primary energy conservation method was scheduling setbacks and reducing CFM during non occupied times.

Occupancy sensors were installed in the labs and conference rooms in the building, which controls the lighting and variable air volume boxes (VAV) for the spaces. This will reduce the CFM output of the AHUs when spaces go into unoccupied mode during a normal occupied time.

There are approximately 300 VAV boxes in the building. Each box and thermostat was inspected for proper operation and calibrated. Discharge temperature sensors were installed after all the reheat coils for monitoring leaking reheat valves. There were numerous defective controllers and actuators replaced.

Air handler 6, which supplies the office area, has an above the ceiling return. The large mechanical room adjacent to the space had not been properly seal and was open to the return path of AHU-6. This would pulled unconditioned air into the return in the winter and in the summer when the electrical vault exhaust fan was on it would pull the conditioned air into the mechanical room. The mechanical room was sealed from the conditioned space to prevent this from occurring. We also installed a VFD and a filtered intake for the electrical vault exhaust.

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