IPD's President, Sam Cosamano, designed the majority of the mechanical systems currently operating at RMH while at another firm. Before embarking on a major facility expansion, RMH was in need of additional chilled water, steam and power. The owner and Architect wanted to try stuffing more ‘stuff’ into the existing mechanical/electrical spaces located within the bowels of the building.

It took some convincing, but Sam and his former employer proved that by constructing a new stand alone energy center, the owner would benefit more in the long run and avoid serious disruptions to services in the short term. Not only did the RMH decide to build the stand alone energy center, but they took Sam’s advice to construct a service tunnel in lieu of the less expensive option to direct bury utilities between the energy center and hospital.

Today, the energy center is one of the Hospitals more prominent and eye catching architectural features with its glass wall showcasing the inner workings of the buildings critical infrastructure. The tunnel has proven extremely useful, with several utilities run through it since being constructed, which would have been much more cumbersome if the direct burial method was selected. The chillers, boiler and emergency generators operate with no noise or vibration transmitted to the hospital proper, which was a problem when the equipment sat in the basement.

Although the building contained all new high efficiency equipment, RMH wanted to know how they could further reduce energy costs. The hospitals manager of plant operations liked the concept behind cogeneration, but was very opposed to using reciprocating engines due to their high need for maintenance. It was at that point Sam introduced RMH to the concept of using microturbines as an alternative to reciprocating engines. They liked the concept after receiving Sam’s analysis showing a less than 5-year payback that hinged upon a potential NYSERDA incentive. Sam was tasked with applying for the incentive, which he did, and shortly after went off to start his current company, IPD Engineering. A few months passed and RMH received their letter of approval for the incentive.

IPD was hired to implement the design, which included connecting (4) 65kW Capstone microturbines electrically to the hospital’s emergency power system and thermally to the hospitals hot water reheat system. The system was right-sized to run at or near full capacity 24/7/365 to ensure the shortest possible pay back. The system has been a tremendous success in the eyes of the owner, NYSERDA, and by Capstone Microturbine, who has conducted many tours of the plant to showcase how easy the systems can be to implement and how successful they can be. The combination of the new energy equipment and the CHP system keep RMH lean from an energy cost standpoint, allowing them to invest more heavily in their core business.