

## Press Release

**Contact:**

Gary Mason                      Tognum America Inc.  
Phone:                              +1 248 560 8480  
E-mail:                              [gary.mason@tognum.com](mailto:gary.mason@tognum.com)

**Agency contact:**

Robert E. Sheldon, APR  
Creative Communications Consultants, Inc.  
Phone:                              +1 210 828 1880  
E-mail:                              [rsheldon@cccinc.com](mailto:rsheldon@cccinc.com)

**Canada's first Pacific Green hospital reduces fuel consumption, emissions and noise with MTU Onsite Energy generator sets**

*New standby power units are also seismically certified to the International Building Code and are designed to continue operating after an earthquake.*

VICTORIA, British Columbia, Canada, August 2, 2012 — When British Columbia's Minister of Health ceremonially switched on the power to Royal Jubilee Hospital's new Patient Care Center recently, it marked more than a major milestone in the construction of the largest single health care project on Vancouver Island. It also activated a new and highly sophisticated hospital energy center engineered for unprecedented reliability and environmentally friendly efficiency.

-more-



*2/7 Canada's first Pacific Green hospital reduces fuel consumption, emissions and noise with MTU Onsite Energy generator sets*

Royal Jubilee's choice of standby power generator sets for this critical project were two 3,000 kW, 12.47 kV generators from MTU Onsite Energy in Mankato, Minn. Powered by 4,678 hp MTU Series 4000 diesel engines, the two 60 Hz units generate 50 percent more power with better fuel economy, fewer emissions and lower decibel output than the four generator sets they replaced.

Royal Jubilee owner Vancouver Island Health Authority (VIHA) said the 412,000-square-foot, 500-bed Patient Care Center (PCC) opened in March 2011, replacing older inpatient facilities on the Victoria campus. Described by VIHA officials as "elder friendly," 85 percent of the rooms in the PCC will be single-bed patient rooms with private bathrooms, allowing for family visits and stays. The spacious rooms will be adaptable to different levels of care, decreasing the need to move patients.

"We are building better patient care for residents and visitors to southern Vancouver Island with the construction of the Patient Care Center at Royal Jubilee and the newly opened emergency department at Victoria General Hospital," said MLA Ida Chong, a member of the British Columbia Legislature. "The new hospital is a visible demonstration of our commitment to providing patients with the best health care possible."

-more-



*3/7 Canada's first Pacific Green hospital reduces fuel consumption, emissions and noise with MTU Onsite Energy generator sets*

The \$350 million Patient Care Center is British Columbia's first Pacific Green hospital, a designation reflecting a commitment to environmental sustainability through the efficient use of energy, focus on water conservation and use of building materials said to minimize the impact on natural resources. The Pacific Green designation also recognizes VIHA's focus on overall health outcomes of patients and the work environment of health care providers, who will benefit from the PCC's increased use of green space, access to natural light, natural ventilation and the availability of alternative modes of transportation to and from the health care campus.

MTU Onsite Energy distributor Cullen Diesel Power Ltd., Surrey, B.C., which has provided MTU Onsite Energy gensets ranging from 50 to 3,000 kW to acute care and specialty hospitals throughout the province, supplied the generator set system for Royal Jubilee. According to Brian Davis, sales specialist with Cullen Diesel Power, the Royal Jubilee energy center installation was one of the largest and most complex projects to date.

"The project specifications included two generator sets, with provisions for a third to be added in the future if needed, paralleling and distribution switchgear, 2 x 6 MVA transformers and more, all of which required comprehensive engineering and a full 24-hour shop test that we conducted at Cullen Diesel Power prior to delivery," said Davis.

*-more-*



*4/7 Canada's first Pacific Green hospital reduces fuel consumption, emissions and noise with MTU Onsite Energy generator sets*

The demands on two generator sets operating in parallel in a hospital application are understandably extreme. Power outages or variations in power quality can wreak havoc in the high-pressure, high-stakes world of health care providers. The new MTU Onsite Energy generators meet the challenge with the capacity to start, accelerate and parallel-connect onto the hospital's emergency power generation bus in less than ten seconds for the first genset and within ten seconds for the second. Additionally, the gensets must automatically share steady state loads and transient step loads over the full range of power within 0.1 +/- 5% of rated kW capacity. The generator sets are UL Recognized and CSA Certified.

Full-load generator testing at least once per year for two hours per generator is recommended for hospitals in accordance with NFPA 110 (National Fire Prevention Association), which Canada adopted in 2007.

According to Randy Arnett, head project consultant with Genivar, a professional services firm in Vancouver, the system's design incorporated innovative features that allow the hospital to conduct these routine test cycles on each generator set without having to connect them to an external load bank, thus saving fuel and avoid risking a power interruption. To accomplish this, the generator control systems integrate a closed transition transfer automatic transfer switch, which

*-more-*



*5/7 Canada's first Pacific Green hospital reduces fuel consumption, emissions and noise with MTU Onsite Energy generator sets*

permits the generators to pick up the hospital load without interruption by paralleling its output to the local utility provider, while transferring the load from the utility source to the generators. Once the generators are carrying the hospital load, the control system allows one of the two generators to operate at a fixed load, adjustable up to its full load rating, while the other generator set carries the balance of the hospital load.

Arnett explained that another feature of the MTU Onsite Energy generator sets is their seismic rating, confirmed by independent testing in accordance with International Building Code requirements. This rating was particularly important to Royal Jubilee, given its location in a seismically active area of Canada. "Following an earthquake, emergency power is considered to be critical for a hospital to continue to function and service the needs of the community," he said.

The heart of each 28,000 kg (60,000 lb.) MTU Onsite Energy model 3000LXC6DT2 generator is a MTU 20V4000 diesel engine. Certified to U.S. Environmental Protection Agency (EPA) Tier 2 emissions standards, the engine produces less nitrogen oxides (NOx) than any engine in its class, and only 107 decibels under full load in standby mode—important characteristics for Royal Jubilee's Pacific Green goal. The 20V4000 also delivers high horsepower-per-liter and impressive fuel economy thanks to advanced digital engine controls and high-pressure common rail fuel injection. Because the new MTU Onsite Energy generators replaced existing units, Cullen and Genivar technicians had to

*-more-*



*6/7 Canada's first Pacific Green hospital reduces fuel consumption, emissions and noise with MTU Onsite Energy generator sets*

carefully plan the logistics of the installation during energy center construction. "It was a challenge to coordinate a new energy center without shutting down existing facilities at RJH," said Rudi van den Broek, chief project officer for VIHA. "The fact that we managed to complete this piece of the project ahead of schedule and under budget is a testament to the work of everyone involved."

"The new power system enables us to continue providing excellent health care, even in the most extreme situations," said Jac Kreut, board chair of VIHA. "The generators provide safe, reliable, efficient and long-lasting power and were the logical choice in keeping with the overall green project design."



One of two MTU Onsite Energy generator sets powered by MTU 20V4000 engines is positioned into place at Victoria's Royal Jubilee Patient Care Center.



Two MTU Onsite Energy 3,000 kW generator sets inside Royal Jubilee's new energy center provide emergency standby power.

(MTU-8288)

- End -

-more-



*7/7 Canada's first Pacific Green hospital reduces fuel consumption, emissions and noise with MTU Onsite Energy generator sets*

#### **About MTU Onsite Energy**

MTU Onsite Energy is a leading producer of diesel-powered generator sets from 30 to 3,250 kW and natural gas-powered generator sets from 30 to 400 kW for standby, prime power and cogeneration applications. The company also provides automatic transfer switches, paralleling switchgear, controls and accessories for complete power system solutions. MTU Onsite Energy is a subsidiary of Tognum America Inc., part of the Germany-based Tognum Group.

[www.mtu-online.com](http://www.mtu-online.com)

#### **About Tognum America**

Tognum America (formerly MTU Detroit Diesel) is a Tognum Group company and is responsible for the manufacture, sales and support of MTU and MTU Onsite Energy branded products in North and Latin America.

With its two business units, Engines and Onsite Energy, the Tognum Group is one of the world's leading suppliers of engines and propulsion systems for off-highway applications and of distributed power generation systems. These products are based on diesel engines with up to 9,100 kilowatts (kW) power output, gas engines up to 2,150 kW and gas turbines up to 45,000 kW.

The product portfolio of the Engines business unit comprises MTU engines and propulsion systems for ships, for heavy land, rail and defense vehicles and for the oil and gas industry. The Onsite Energy business unit supplies distributed power generation systems carrying the MTU Onsite Energy brand. These comprise diesel engines for emergency power, prime power and continuous power, as well as cogeneration power plants based on gas engines and gas turbines that generate both power and heat. Tognum's product portfolio also features fuel-injection systems built by L'Orange.

In 2011, Tognum generated revenue of around €2.97 billion and employs approximately 10,000 people. Tognum has a global manufacturing, distribution and service structure with 23 fully consolidated companies, more than 140 sales partners and over 500 authorized dealerships at approximately 1,200 locations. Since September 2011, Engine Holding GmbH, a joint venture between Daimler AG and Rolls-Royce Group plc, has a majority holding in Tognum.

[www.tognum.com](http://www.tognum.com)

###