



## Olympic View Power Station

### BACKGROUND

Material Integrity Solutions (MIS) provided complete design and engineering for a 5.6 MW power station near Shelton, Washington. MIS provided the following services to design and permit the plant for operation:

- Surveying, grading plans and soil analysis.
- Civil/Architectural/Structural design and engineering.
- Mechanical design and engineering.
- Acoustic analysis and design.

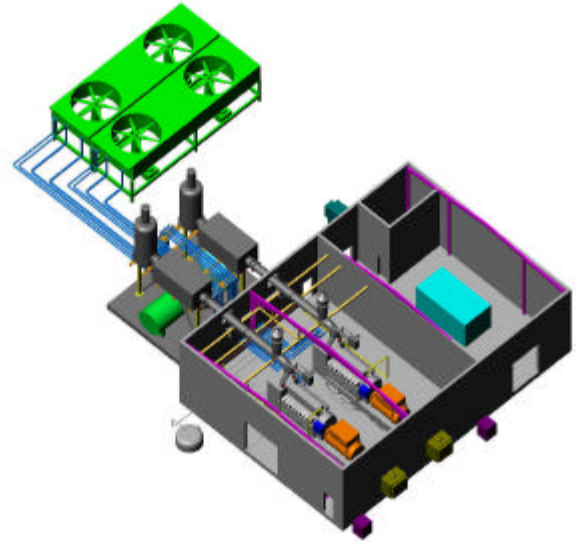
### DISCUSSION

To satisfy its obligation to supply consistent power to the community, the Public Utility Department of Mason County commissioned the construction of the new power plant. Working closely with other project contributors, MIS provided the engineering expertise required to accomplish the goal of supplying reliable continuous power to Mason County residents and businesses.

Olympic View Power Station is a 5.6 MW power plant incorporating 2 natural-gas-fueled engine-generator sets. The plant is designed to be manned or operated remotely depending on load requirements. The physical structure of the plant consists of a single building separated into engine and control rooms, with the engine room housing two Wartsila 18V220SG engine-generator sets and their associated auxiliary and control equipment.



*Wartsila 18V220SG Gensets*



*3D Model of the Power Plant*

Each of the two gensets produces a gross electric output of approximately 2,800 kW. Approximately 5.5 MW net electricity is supplied to the grid with both gensets at full load. The facility design allows power to be supplied in increments as needed to balance demand.

In order to save drafting time and eliminate space management issues before construction started, the plant layout was designed using solid modeling software. This 3D spacial arrangement of plant structures and equipment allowed for timely and efficient design and construction of the facility.

### CONCLUSION

MIS met the client's goals by assembling a team of engineers and working closely with other contributors such that the client was able to deliver reliable cost effective electricity to their consumers.