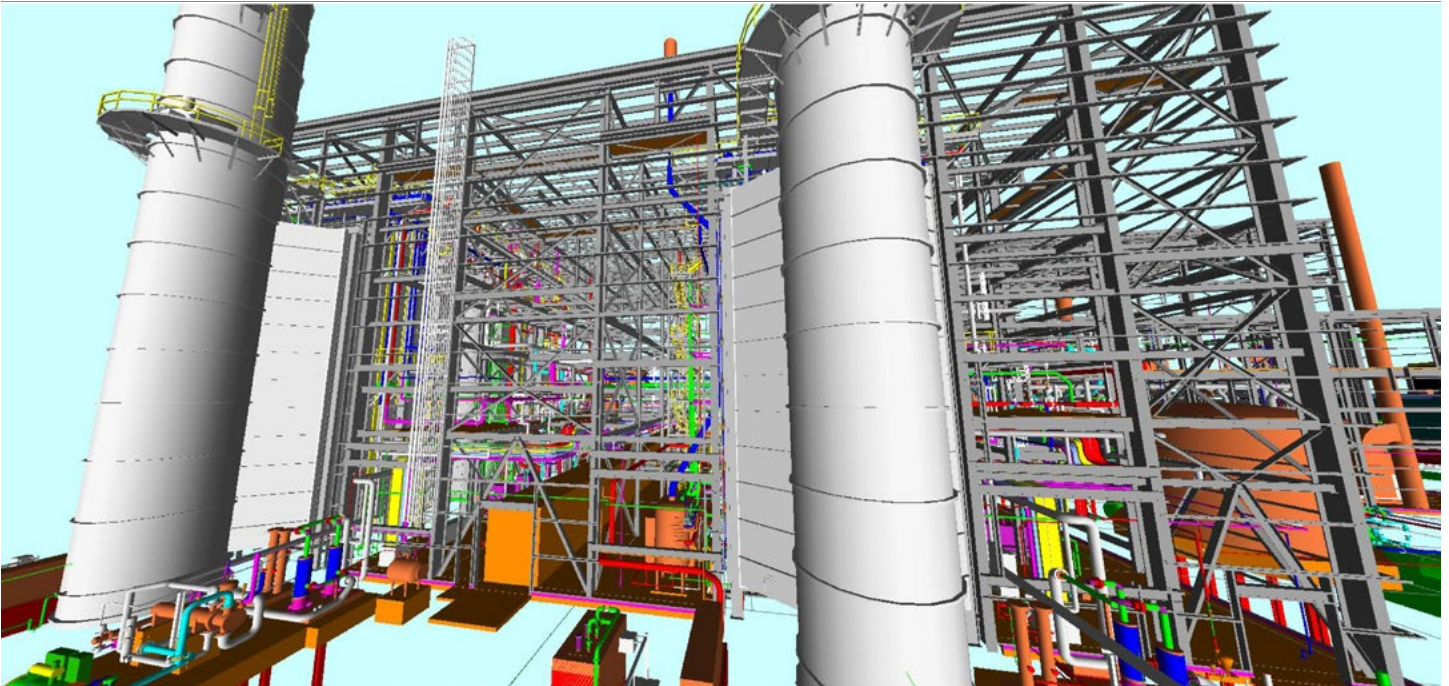


# BIM - Building Information Management



## Dunbar Mechanical's BIM Timeline

**2013**

Laser Scanning of existing spaces integrated into Dunbar's BIM processes

**2006**

BIM application begins to become viable for engineers/designers

**2000**

3D utilized in conjunction with Sheet Metal trade, coordination drawings

**1998**

Begin utilizing 3D CAD: generate bill of material, consistent and accurate drawing, cut-lengths identified for each piece, spool sheet as "router"

**1994**

Computerized cut-length program

**1990**

Hand sketches, manual "take-off" of material, Pipefitter's Handbook and manual calculation of cut lengths

Dunbar Mechanical has been producing 3-D models of our work since 1998 to

- increase our productivity.
- reduce overall project schedules.
- ensure impeccable quality.

Today's BIM practices involve extensive coordination with engineers and the creation of fully-integrated illustrations of facilities, like the 720+ MW combined cycle peaking plant shown above.

**Owners are the real winners** through improved communications, greater coordination between disciplines and more finely integrated project processes.

Dunbar Mechanical utilizes NAVISWORKS®, AutoCAD® compatible 3-D modeling software which ties our BIM capabilities to our fabrication process. We work at the highest level of BIM to detail, plan and produce intricate components as we bridge engineering vision with construction detailing. BIM is part of our everyday process for project success.

### The benefits of BIM include:

- All systems including mechanical, electrical, security and fire protection, can be shown at the same time.
- The ultimate end user as well as designers and the construction team can take a "virtual tour" through the facility to assure the systems are constructed in the preferred manner.
- Identifying discrepancies and resolving interferences BEFORE fabrication, minimizing costly change orders and field delays.
- Cost and schedule data integration — mitigating risk, managing costs and speeding delivery.
- Complete as-built drawings are available electronically and on paper for easy reference.