**EAS 375**

**Spring 2011**

**Lecture question - Hydroelectricity**

How is hydroelectricity is generated?

Gravitational forces of falling or flowing water. Tidal action/wind.

What percentage of electrical generation comes from hydroelectric generation?

7%

What are the major types of hydroelectric generation?

Conventional (dams), pump storage, river flow, tidal, wave.

Define hydrologic head.

The difference between the elevations (the water levels in the forebay and the tailbay).

What is the relationship between the height of the hydrologic head and amount of electricity that can be generated?

What is the penstock?

What are the major advantages of dams in the generation of electricity?

What is diversion (run-of-river) generation?

What is the advantage of pump storage generation?

Describe how a tidal barrage works?

What are the major disadvantages of hydroelectric generation?