## **Smart Meters**

- Real-time consumption information (needed some math on current meters)
- Allows flexible tariff (time and/or use based) structure EV surcharge!
- Allows suppliers to adjust for usage patterns to minimize use (or maximize income)
- Allows for home-generated power to be exported to the grid.
- Detects scope of outages faster.
- Cost to BC of 1.8m meters ~ \$930 million  $\rightarrow$  annually saving about \$25m
- Meter readers no longer need to come on private property (except to verify proper operation)
- Allows control over future "smart appliances"
- Privacy concerns may become a problem when smart appliances are used.
- Health concerns are minimal since Wi-Fi broadcasts are ON less than 1 minute/day
- Swiss Precautionary limit 4.5uW/cm<sup>2</sup> BC @20cm is 2uW/cm<sup>2</sup> & 0.005uW/cm<sup>2</sup> @3m
- Purportedly detects theft of electricity but not if one is smart! Needs "feeder meters".
- Would be nice to be smart upgradable connect to water & gas usage meters in future

## TOU prices from the Ontario Energy Board

Summer Weekdays			
Time	Period	¢/kWh	
7 am to 11 am	Mid-Peak	8.0	
11 am to 5 pm	On-Peak	9.9	
5 pm to 9 pm	Mid-Peak	8.0	

Weekends & Holidays			
Time	Period	¢/kWh	
All day	Off-Peak	5.3	

## Itron, Cisco Win BC Hydro



Transmission: 1 Watt in the Industrial-Scientific-Medical (ISM) band (900-928 MHz)

Communications from the Smart Meter to the customer's In Home Display (IHD) at a frequency of 2.4 GHz is available as an option.

www.bccdc.ca/NR/rdonlyres/43EF885D-8211-4BCF-8FA9-0B34076CE364/0/June92011\_BCCDCReport\_BCHydroSmartMeters.pdf