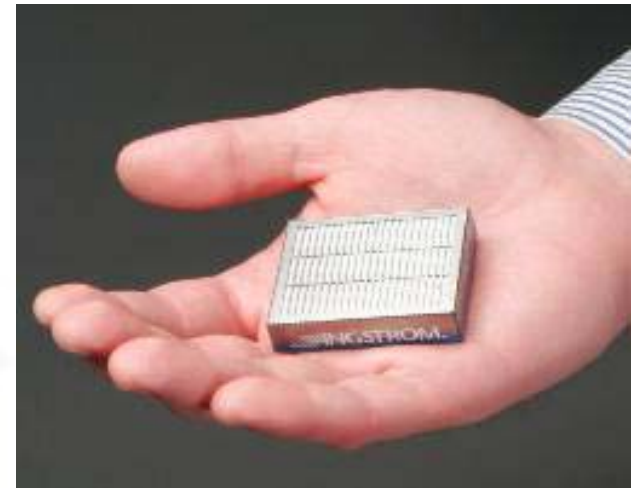




## ***Micro Hydrogen Systems for Portable Power***



***Better than  
batteries***

## *Angstrom Power Inc. North Vancouver, B.C.*

### **Business:**

- Micro hydrogen™ fuel cell systems for portable devices
- Fuel cell, fuel storage and refueling technology



### **Overview:**

- Founded in 2001, 23 employees
- 7 patents; 41 patents pending

### **Investors:**



## *Vision: Better than Batteries*



### **Higher Performance**

- High energy density
- Long run-times

## *Advanced Power Source for Handheld Devices*



### **More Convenient**

- Refueled in minutes



### **Cleaner**

- No CO<sub>2</sub>
- Only emission is water vapor
- No toxic materials

## Reality: Commercially Available Products

Angstrom offers an end-to-end suite of micro hydrogen™ fuel cell products, fuel cell power sources, and hydrogen refuelling stations



**AXS fuel cell system**  
fully integrated fuel cell system that delivers over 350Wh/l energy within a 25cc size



**G2 Fuel Cell Charger**  
a 5 Volt, 2 W portable power source. Capable of recharging phones and PDA's on-the-go.



**A2 flashlight**

1W LED flashlight that provides over 24 hours continuous run-time on a single refueling.



**Bicycle Light**

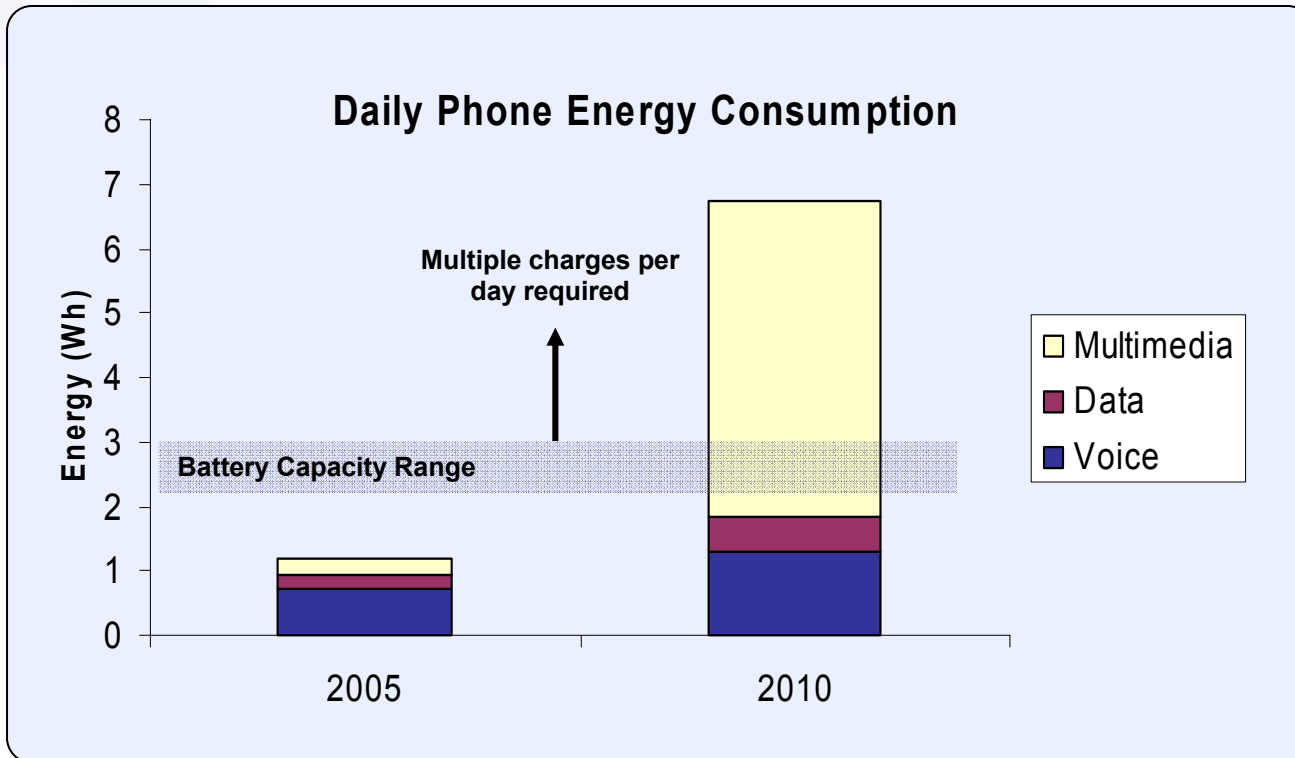
high-powered LED bicycle light available now for clean energy demonstrations.



**Refueling station**

portable refueling stations provide infrastructure support for Angstrom's micro hydrogen™ devices.

# Opportunity: Rising Cellphone Energy Demands



**“Endless” Demand for More Power**



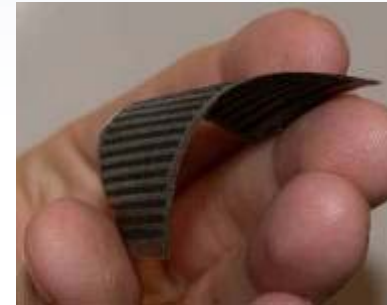
## Angstrom Technology

**Power:** Thin film fuel cell produces high power at high efficiencies.

**Energy:** Proprietary metal hydride technology for hydrogen storage provides high energy density in prismatic packages.

**Scale:** Passive operation and tight integration enable achievement of small form factors

**These unique properties enable seamless integration into existing devices with *Better than Batteries*<sup>™</sup> performance**



**Flexible fuel cell  
2W average power at  
> 50% efficiency**



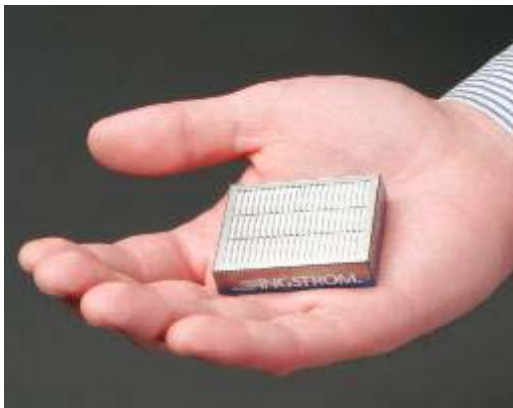
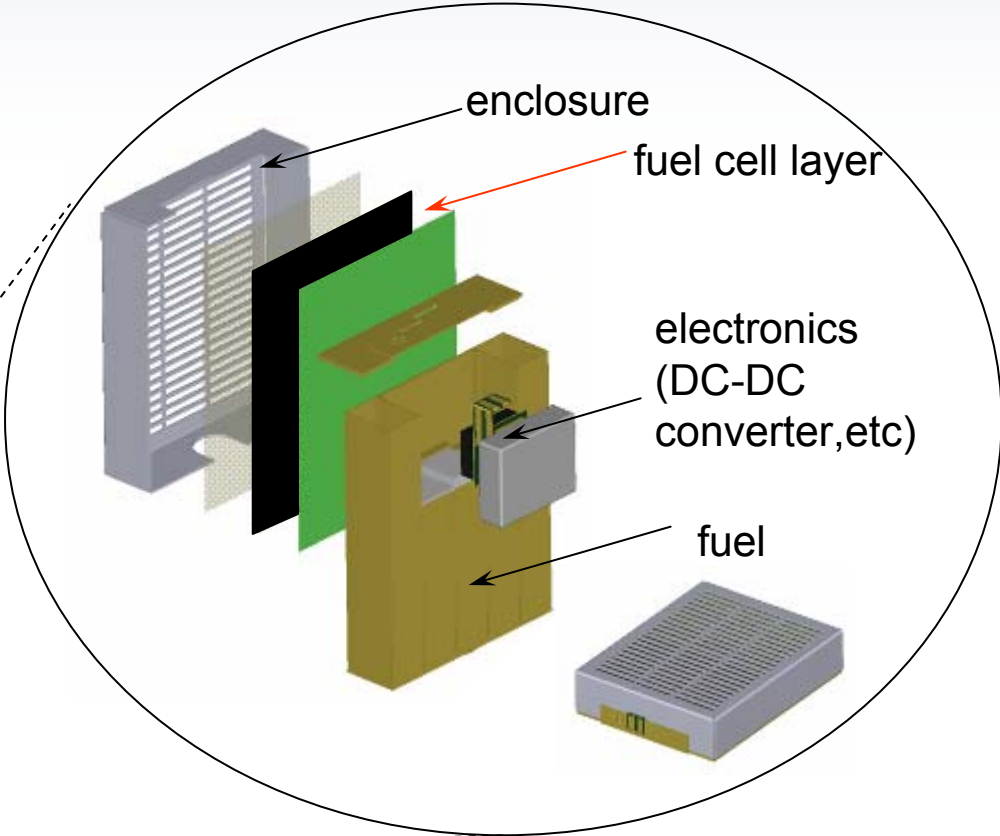
**Energy density equivalent to  
lithium-ion in 25cc**

# Fully Integrated Micro Hydrogen System

**Scale:** 25cc for entire system  
(90% of volume is fuel;  
fuel cell only 2% of volume)

**Power:** 1.5 watt average,  
3 watt peak

**Energy:** 350 Wh/l



Available Today

## ***Public Demonstration Projects***



## Summary

- “Endless” demand for more power in portable devices.
  - Billion dollar (\$US) cell phone battery market
  
- Unique technology for high energy density in small form factors.
  
- Clear path to market
  - Demo projects
  - Specialty products
  - Mass market battery replacement products



## Remote Field Hydrogen Fuel Cell System

- \$CDN 1.3 Million
- Three Phased, Two Year Project
- Funded in part by Sustainable Development Technology Canada
- Phase 0 – *Micro Hydrogen*<sup>TM</sup> Bike Lights
  - Six Month Bike Light Trial
  - 10 Angstrom employees
  - 6000 km and 340 hrs of use on the lights
  - Saved 2 tonnes of CO<sub>2</sub> emissions



## Remote Field Hydrogen – Phase 1

- April 2006
- Six Month Trial
- 20 Participants
- 4 User Sites
- Testing Prototype Fuel Cell Devices and Refuelling Technology

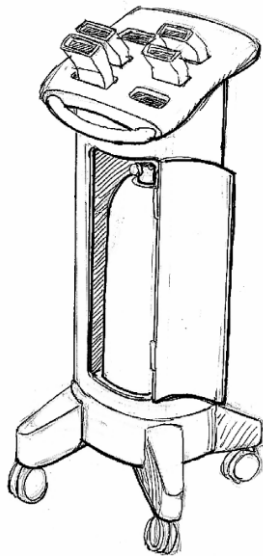


- University of Victoria: Flashlights for Campus Security Officers
- Vancouver International Airport: Charging of 2-Way Radios
- Vancouver Urban Search and Rescue: High Powered Head Lamps for Rescue Operations
- BC Children’s Hospital: Doctors Charging PDAs during Rounds



## Remote Field Hydrogen – Phase 2

- April 2007
- Six Month Trial
- 100 Participants
- Same 4 User Sites
- 2<sup>nd</sup> Generation, Integrated Fuel Cell Devices
- “Smarter” Refuelling Technology



- Other Project Partners:
- BOC Group – fuelling expertise and hydrogen gas
- Powertech Labs – device testing
- HTEC – hydrogen gas