Load IQ

Energy Intelligence

Dr. Hampden Kuhns (CEO)

Load IQ makes an energy monitoring system that itemized energy bills by appliance so that people can make informed cost effective decisions

Company Highlights

- $1.5M grant funding from CEC, NIREC, DOE, & NSF
- ***$500K opportunity*** with NSF SBIR Phase 2b (non diluting R&D funding upon raising 3rd party $2M investment)
- Exclusive license to 5 Patents w/2006 priority date
- Paid trials with Siemens, GDF Suez, and global telecom company
- 2011 CA Cleantech Open "Energy Efficiency" Winner
- Starting 10 site trails with Tier 1 telecom served through channel partner (current $50M opportunity)

Energy is invisible so it get's less attention

- Load IQ makes an energy monitoring system that itemized energy bills by appliance so that people can make informed cost effective decisions

- Company:
  - 9 Employees in 2013 (and growing)
  - Formed in 2007 as DRI Startup
  - 5 patents
  - Grants from NSF, DOE, California, and Nevada
  - 2011 Winner of California Energy Efficiency Clean Tech Open
  - Currently serving telephone company central offices

Faster & less expensive install to deliver energy management to underserved markets

Current Approach-Branch Circuit Metering: Up to 42 sensors packed in panel reporting on circuit level loads (2–4 hour install)
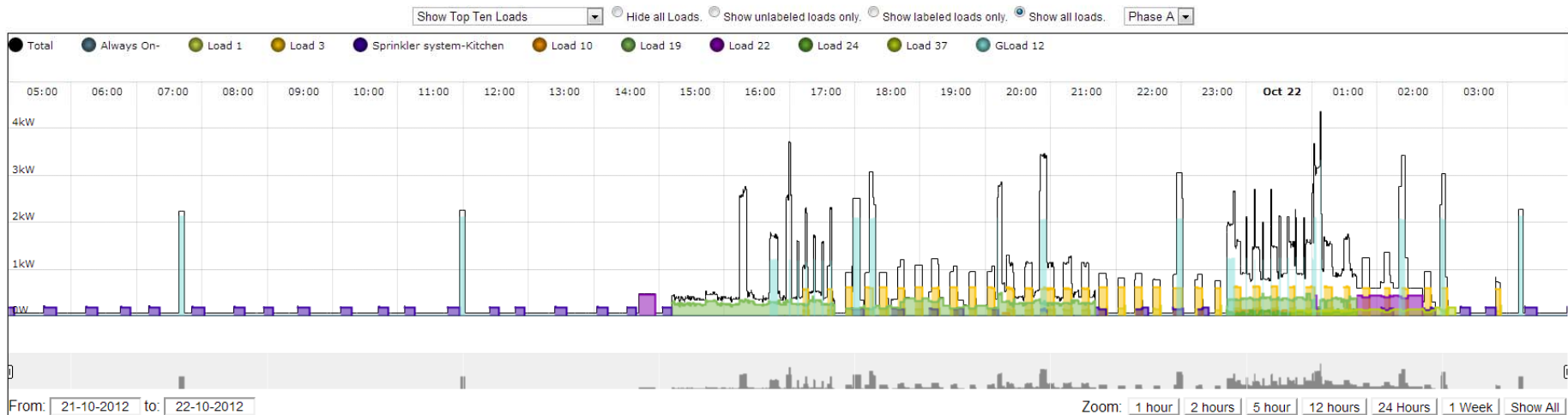
VS

Load IQ - Utility Accountant:
Flexible sensors on mains isolating 20 loads through signal processing (15 minute install)
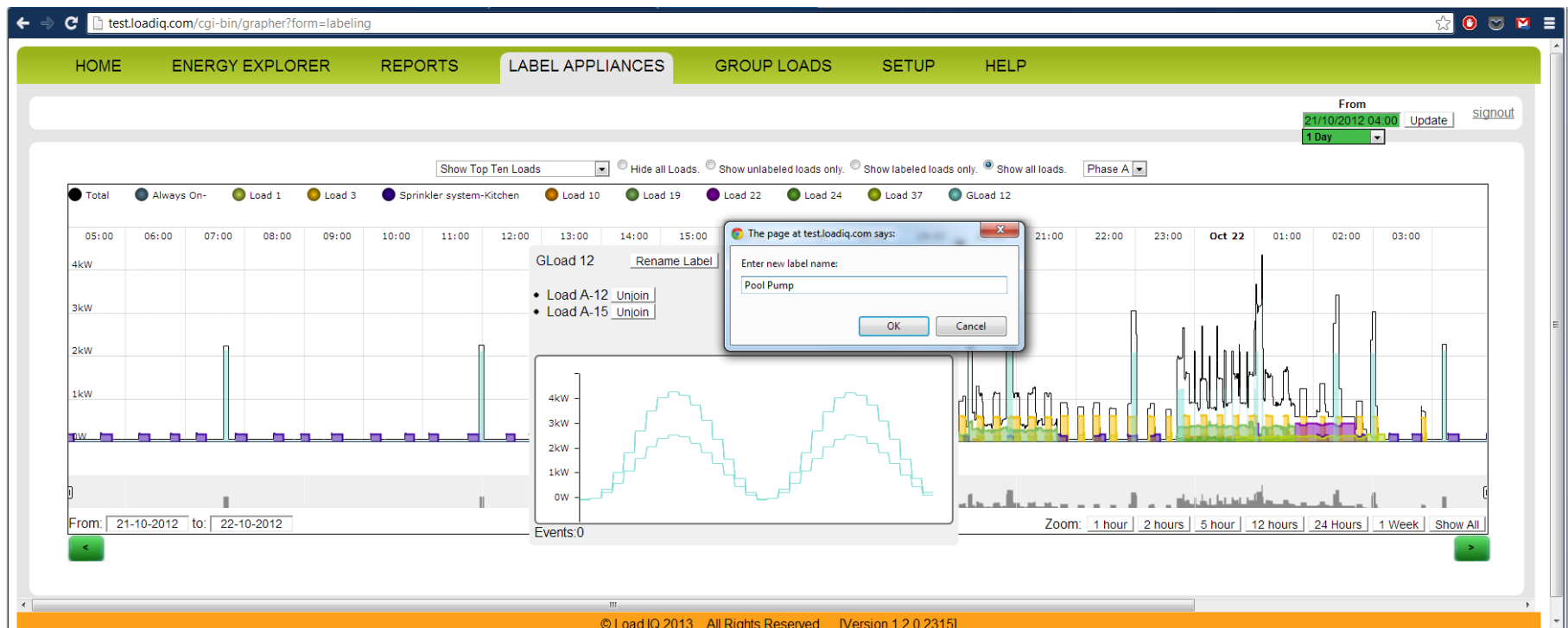
End-Use Energy Results

With itemized energy usage, we know when appliances turn on and how much they cost to use.

But don't yet know what they are…

Web Interface Allows Labeling of Loads

With a network connected tablet/laptop, _anyone_

(e.g students) can assign labels to loads

Will it help?

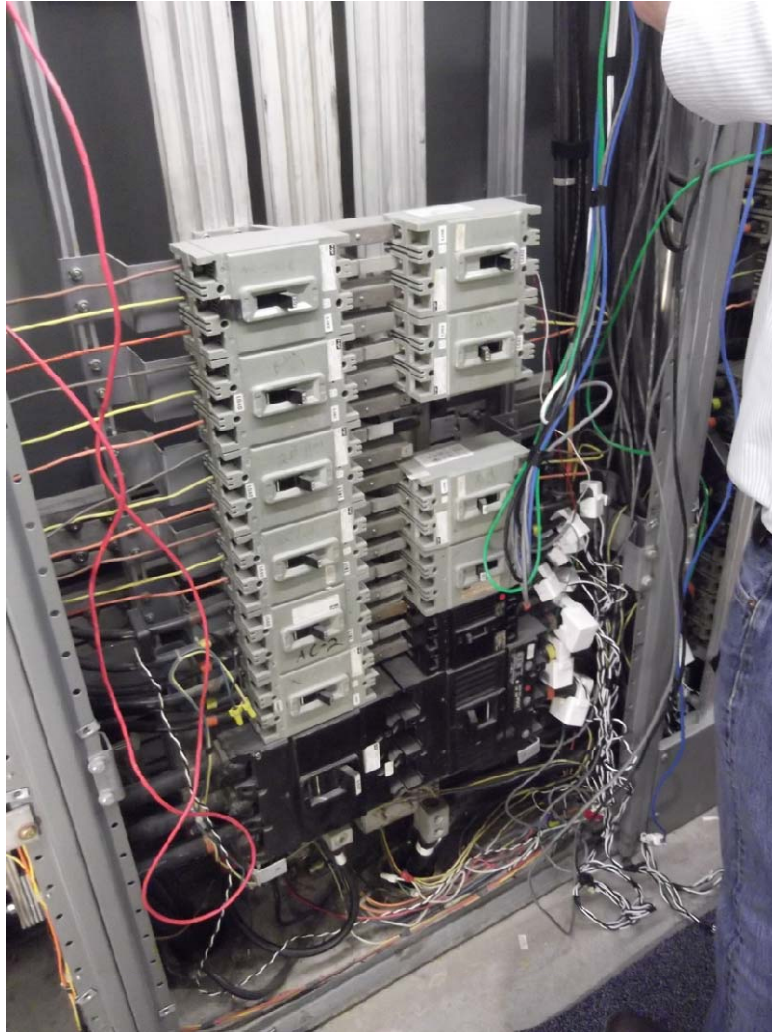Research shows that appliance level feedback helps save energy (Armel et al., 2013)

Pilot Test at Obrien

- Load IQ installed sensors on:
  - Mains
  - AC Units 1, 3, 5
  - Kitchen
  - 2nd Floor West Wing (plugs and lights)
- Students will monitor how energy is used in their building
- Heating, Ventilation, Air Conditioning, and Lighting will be benchmarked with "typical" schools
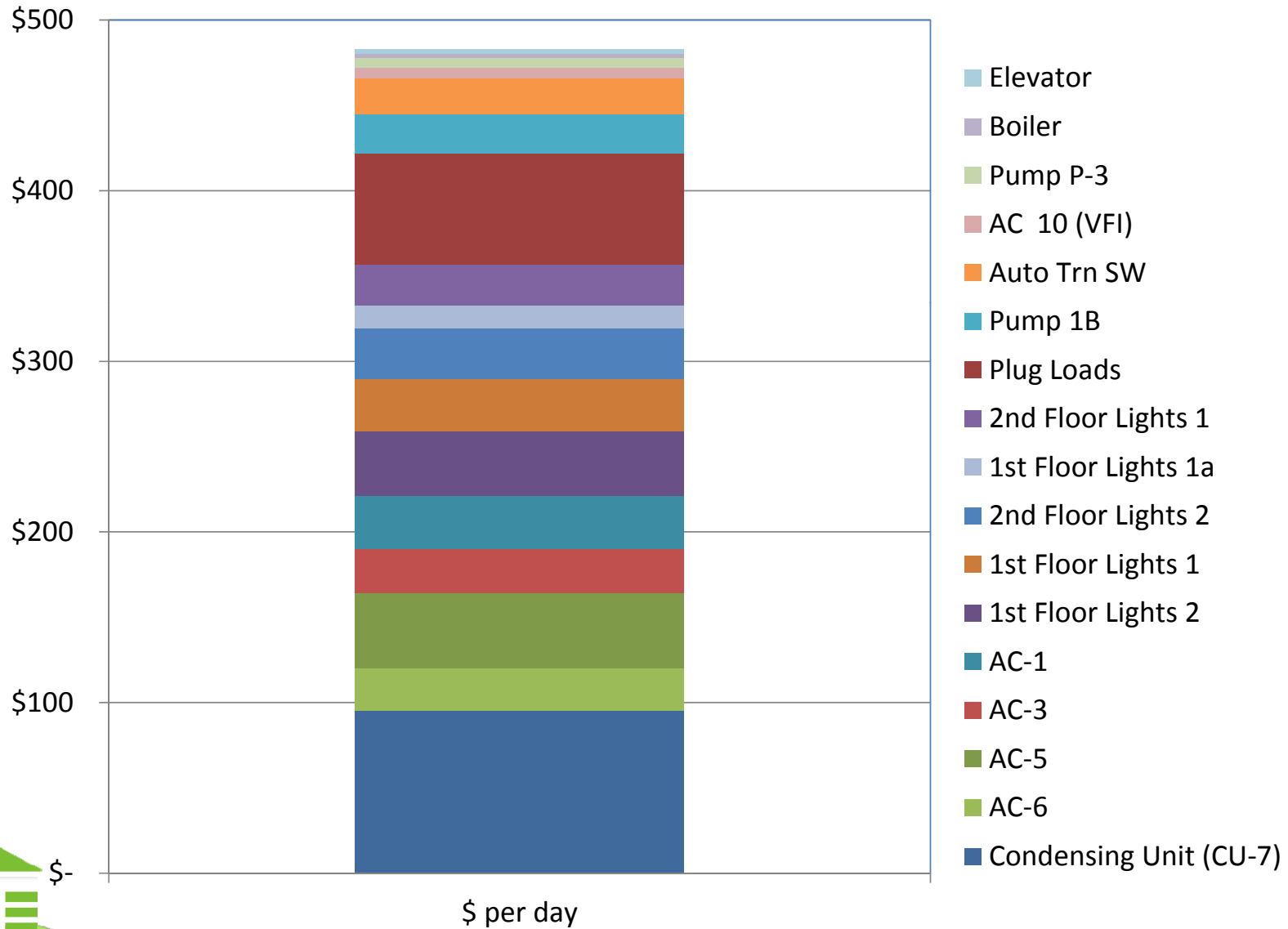- Cost-Effective recommendations will be made
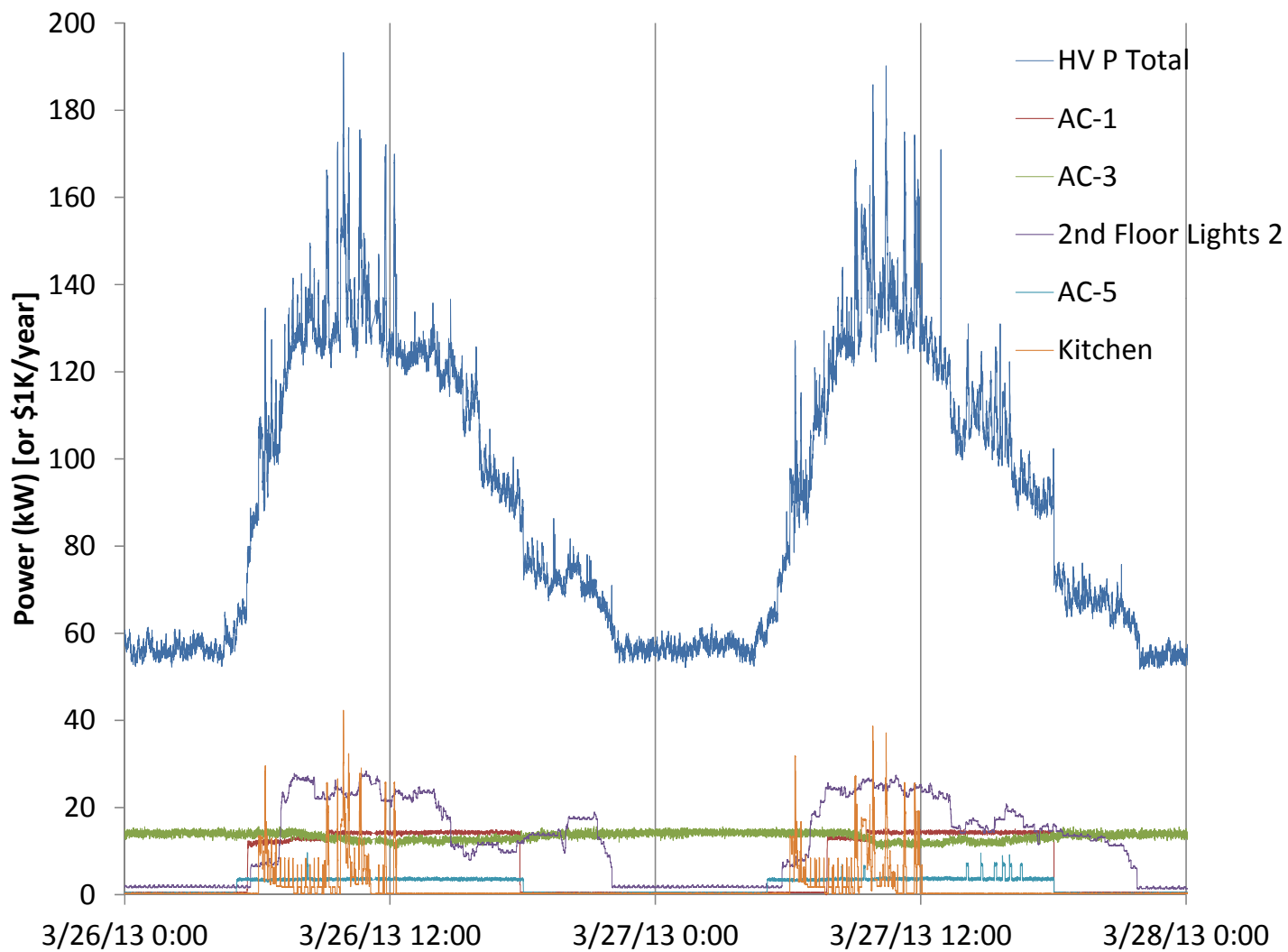
Installation of sensors

Now in $ (Answer to question 4)

Legend:
- Elevator
- Boiler
- Pump P-3
- AC 10 (VFI)
- Auto Trn SW
- Pump 1B
- Plug Loads
- 2nd Floor Lights 1
- 1st Floor Lights 1a
- 2nd Floor Lights 2
- 1st Floor Lights 1
- 1st Floor Lights 2
- AC-1
- AC-3
- AC-5
- AC-6
- Condensing Unit (CU-7)

$ per day

Wednesday and Thursday: ~60% of energy never turns off
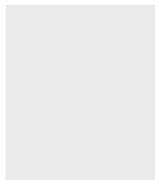
Executive Team

Dr. Hampden Kuhns (CEO & Co-Founder)

1997-2011 Research Professor at the Desert Research. BS Caltech. Ph.D. Carnegie Mellon.

2011 Winner of California Clean Tech Open Energy Efficiency Category.

Bhuma Kandula (VP Business Development & Co-Founder)

2007-2012 – Owner and CEO of BIR Solutions LLC with 40 employees in Hyderabad.

Created >750 Business Intelligence Solutions for SAP Labs in 35 countries.

New Recruit (VP of Sales): Q3 2013

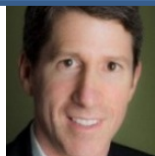| **Dr. Babak Bastami** **(Director. of R&D)**	**Dr. Navid Fallah** **(NSF Postdoc Researcher)**	**Dr. Sohei Okamoto** **(Software Engineer)**	**Scott Kimmich** **(Sr. Software Engineer)**	**John Bird** **(Dir of HW Engineering)**

Dave Weinerth (TBD)

2010-2012: EVP of Marketing at SCIenergy (international energy management company).

2006-2010: PARC Director of Business Development.

Lawrence Udell (Advisor)

Executive Director of both the Center For New Venture Alliance and the California Invention Center. Founder of over 20 corporations.

What next?

- Launch in Q3 2013
- Market to:
  - Telephone central offices
  - Retail
  - Commercial
- Currently fundraising to close series B and match $0.5M of NSF grants

Thank You

- Questions?