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Plug Load Energy Conservation Awareness Campaign

The Behavioral Intervention (Energy Chickens) includes a plug load energy conservation awareness campaign that will be tied to the Energy Chicken game. The awareness campaign includes a public commitment in the form of an Energy Chickens Pledge as well as visual prompts including an awareness sticker and a series of posters that will be utilized on a rotating schedule throughout the Behavioral Intervention (Energy Chickens).

Participant Commitment Pledge

Participants will be asked to make a public pledge of their commitment to reduce their plug load energy consumption by signing the following pledge (Figure 1) and posting it in their office or cubicle:

Figure 1. Participant Commitment Pledge.

Awareness Stickers

At the same time that we obtain each participant's public commitment we will be giving them an Energy Chickens awareness sticker (Figure 2) to display in their office as a daily reminder to turn off their appliances when not in use. The awareness stickers will serve as a prompt to do simple things such as turn off their monitor or task lights when leaving their office. Ideally the sticker will be placed on the corner of a computer monitor or appliance within view from a seated position within the participant's office.

Figure 2. Plug Load Awareness Sticker

Poster Series

The poster series is designed to provide information about plug load energy consumption and as a reminder of ways to reduce office energy consumption. The posters will be placed in employee break rooms and other public areas. The poster campaign is split into two main areas of focus. The first set of posters is designed to provide statistics about appliance energy usage in the office, and the background and importance of vampire loads. These posters are to serve as an educational tool for increasing awareness about how much energy appliances actually use, the importance of powering down/unplugging where applicable and to change daily habits. The second set of posters is designed to create continued awareness of the importance of energy conservation. There are 12 posters in total and these will be changed weekly to help maintain interest throughout the three month intervention.

How much energy does your office use?

Plug loads

40% of office energy use

UNPLUG IT

Lighting systems account for 30%-40% of energy use in buildings. On average occupants spend more than 50% of their time away

appliances remain operational all day. More than 50% of office energy is used during non-working

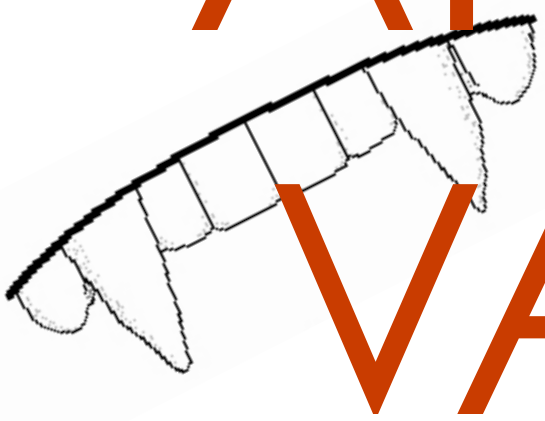
from desks but is a large potential for energy saving in restrooms, meeting rooms, store rooms, and single

There offices as they are unoccupied a 70% , 66%, 56%, and 53% of the time respectively.

hours.

person

ARE YOU A VAMPIRE?



Vampire loads are the power that is drawn from a device when it is not turned on but is still plugged in, for buildings like yours:

5 coffee Pots use 49.95 Kwh or $4.25 per year.

6 copiers use 157.68 Kwh or $13.38 per year.

140 computer monitors use 1,386 Kwh or $117.60 per year.

100 computer towers use 2,488 Kwh or $211.00 per year.

100 cell phone chargers use 228 Kwh or $19.00 per year.

100 computer speakers use 1,568 Kwh or $133.00 per year.

Total amount per year: 5,877,630 Wh, or $498.23.

Chickens not feeling too well?

Try shutting off your monitor when you leave your desk!

SAVE ENERGY

SAVE POWER

Shut down your computer when you leave!

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

Shut down your computer when you leave the office and on weekends.

Chickens not feeling too well?

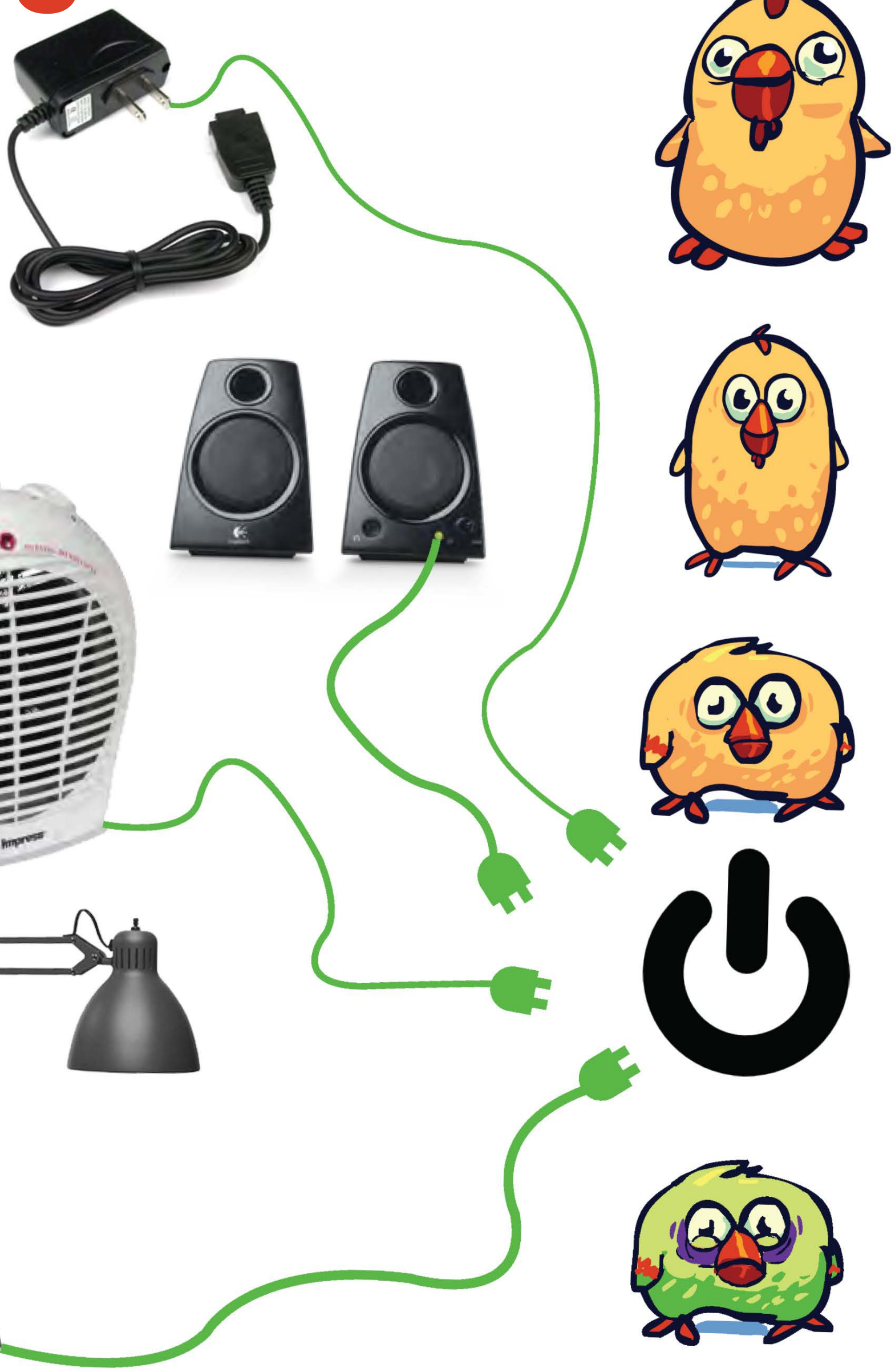
Take advantage of sunlight...

turn off your task light!

Turn it off when you step out

Unplug it when you leave!

Chickens not feeling too well?



Unplug devices that aren't in use!

1800

2012

2050?

TURN IT OFF!

Turn it off!

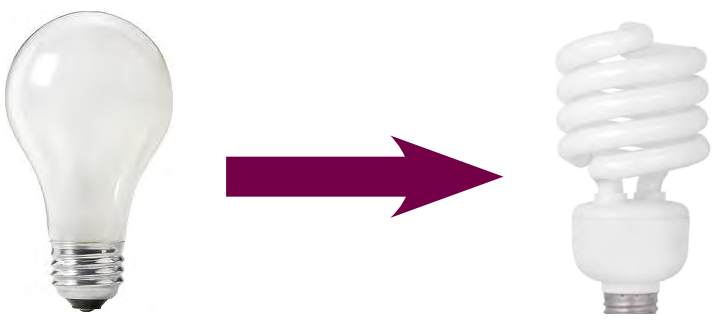
Unplug it!

Power Down!

Dim it!

Close it!

Conserve it!



Appendix 7

Serious Games for Energy Saving

Penn State Occupant Behavior Group

BP2 Final Report: January 28, 2013

Investigator Participants

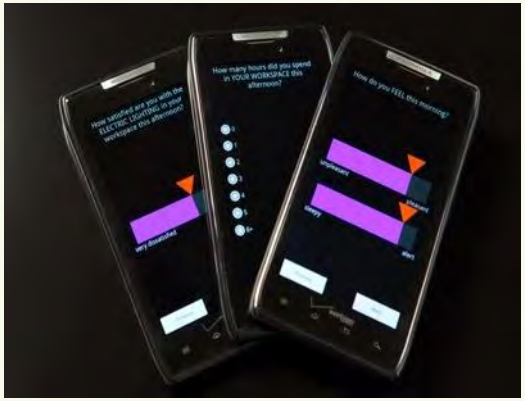
- Brian Orland, Dena Lang, Dept of Landscape Architecture
  Kevin Houser, Dept of Architectural Engineering
  Nilam Ram, Dept of Human Development and Family Studies
  Josh Smyth, Dept of Biobehavioral Health

Project staff and students

- Erik Bush, Sarah Rumbaugh, Gabbi Salvemini, Kellie Waksmunski, Rebecca Olson, Dept of Landscape Architecture
- Minchen Wei, Dept of Architectural Engineering
- Nate Kling, Sean McCurry, Peifeng Yin, Michael Coccia, StudioLab

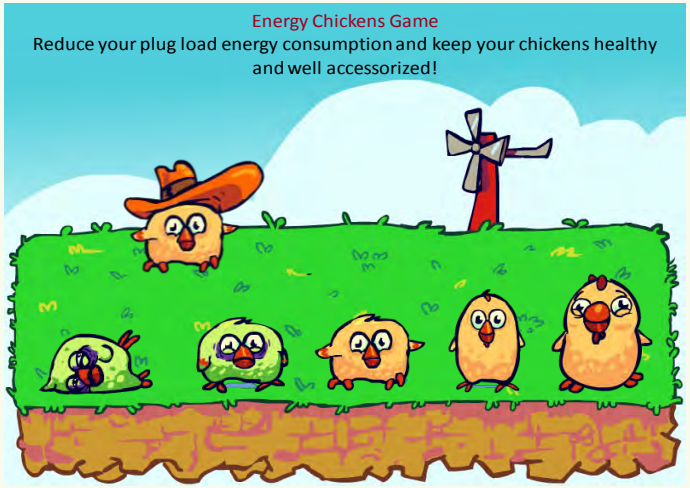
Three Components of Overall EEB Study

Occupant Surveys:



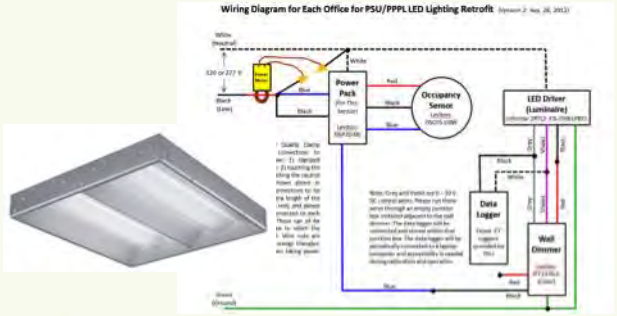
- ✓ Occupant surveys administered for both Energy Chickens Behavioral Intervention and retrofit Lighting studies.
- ✓ Pre-surveys administered online via Qualtrics.
- ✓ Baseline smart phone daily occupant surveys administered to participants in all studies.
- ✓ Three weeks of daily surveys for Energy Chickens game, two weeks for lighting study.
- ✓ Post-surveys administered online via Qualtrics.

Serious Game "Energy Chickens" Intervention



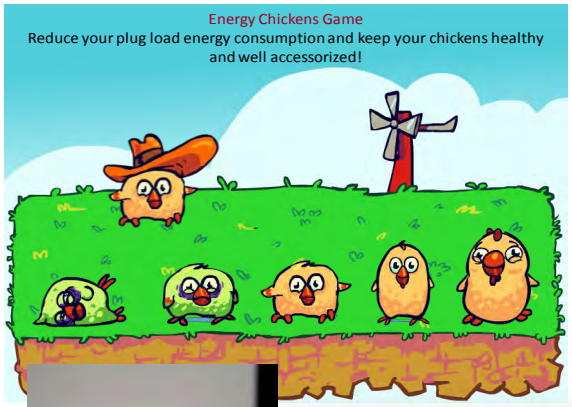
- ✓ Energy Chickens deployed at multiple locations.
- ✓ Participants have engaged with Energy Chickens game for extended time period.
- ✓ Pilot data indicate potential energy savings from 20-60 %.

Lighting Retrofit Interventions:



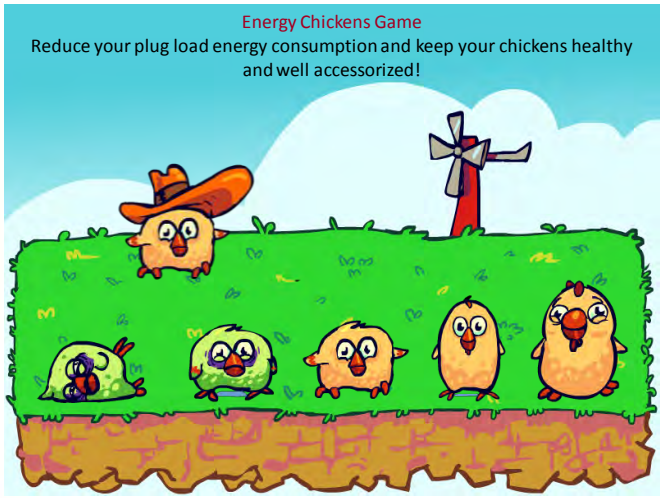
- ✓ Year One:
  Examined DOE's Enhanced Spectrum (SEL) hypothesis relative to occupant behavior and well-being.
- ✓ Year Two:
  Examined effects of LED retrofit accompanied by user controlled dimming.
- ✓ Pilot data indicates savings > 50%.

Energy-saving Interventions



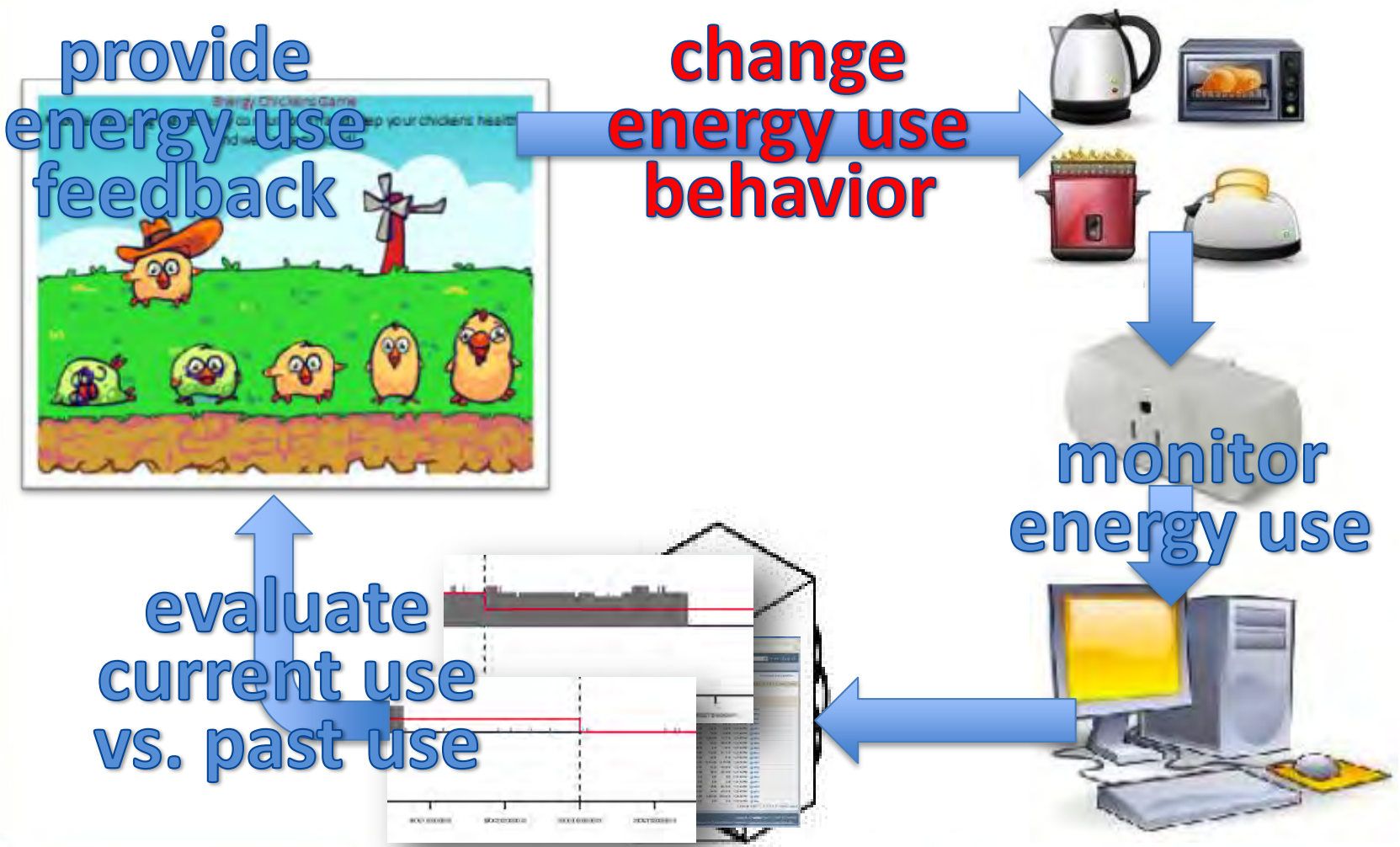
- *Serious games* are game-like simulations of real-world activities and events used to train or educate users. While fun can be a useful side-product, the object is usually to use the engagement of games to bring about behavior change.
- Energy saving *Serious games* interventions make no changes to building fabric but achieve energy saving through educating and changing behavior through emotional attachment and rewards.

Serious Games: *Energy Chickens*



- *Energy Chickens* is an example of a "virtual pet" game.
- Virtual Pet games have been effective in changing behavior in fields such as medicine and commerce through the engagement and commitment that emerges from the social bond between the player and their "pet."
- *Energy Chickens* respond to energy use detected via plug load monitors deployed in the workplace.

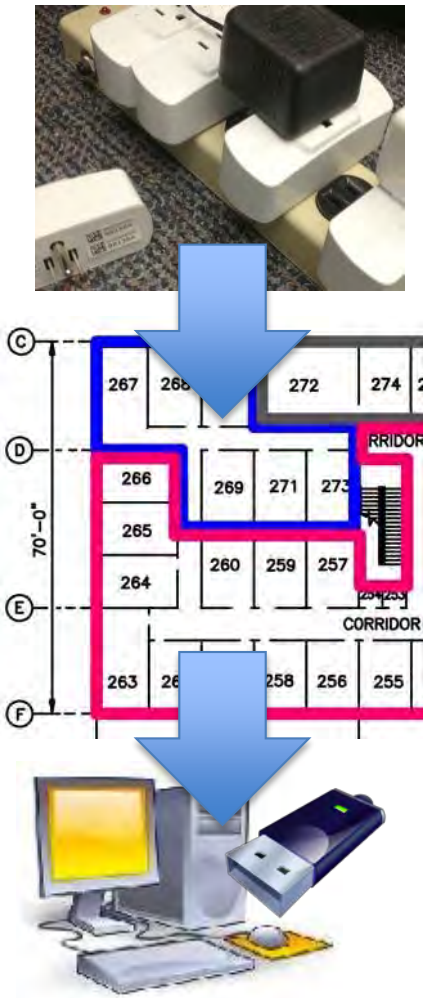
Flowchart: Energy Use Feedback



Operation of Plugwise® Sensors

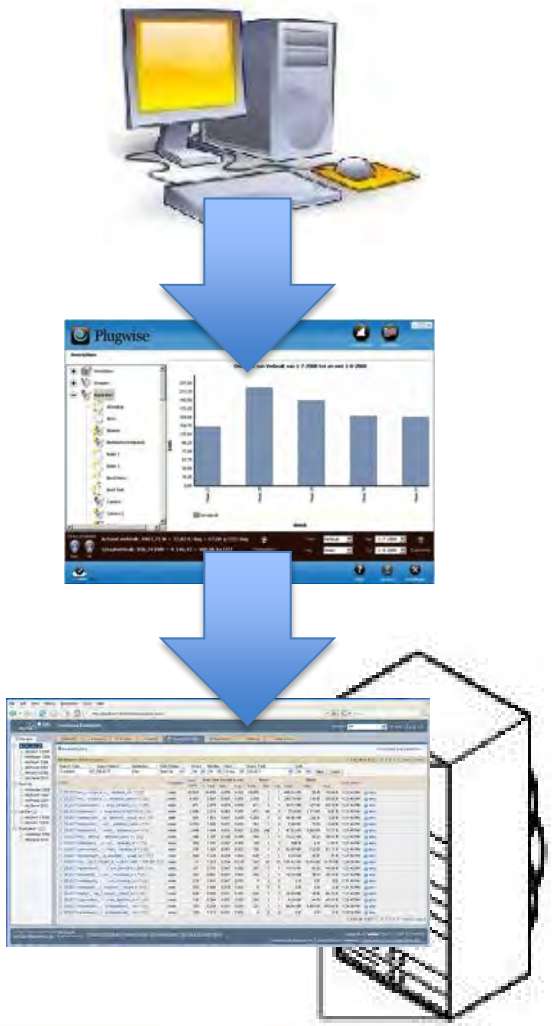
- User appliances are plugged into a Plugwise® energy sensor plugged into a standard wall or powerstrip outlet.
- Plugwise® sensor sends energy usage via Zigbee® protocol radio frequency communication to a timing device and is collected by a local computer server.

Deployment of Plugwise® sensors



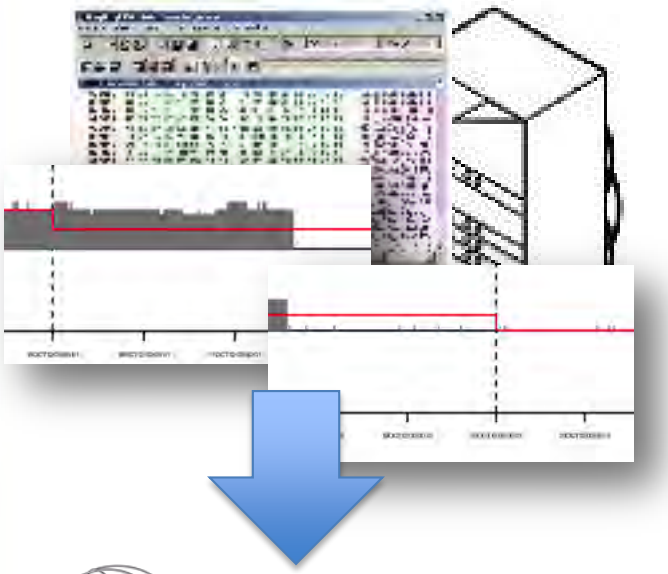
- Sensors are deployed, up to 64 Plugwise® sensors and a server supporting a single workgroup
- Limitations of Zigbee® radio frequency communications in practice limit workgroups to ten or fewer participants.

Data Collection and MySQL Database

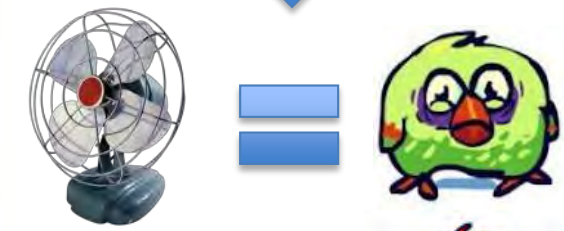


- Time-stamped records of energy usage are communicated via the Internet to a proprietary dashboard interface
- Exporting script developed by Penn State's StudioLab strips energy data from Plugwise® and saves to a MySQL® database resident on a server at StudioLab.

Energy Chickens Baseline



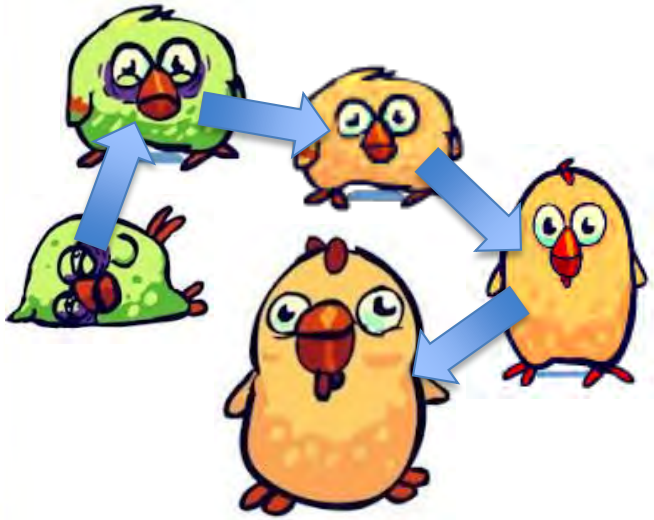
- Each office appliance is represented by a single database record.
- From surveying vacation and out-of-office days, a “baseline” period was identified for each occupant.
- Average energy use calculated for each appliance during the baseline.



Running a fan while out of the office may result in energy over-use and less healthy chickens.

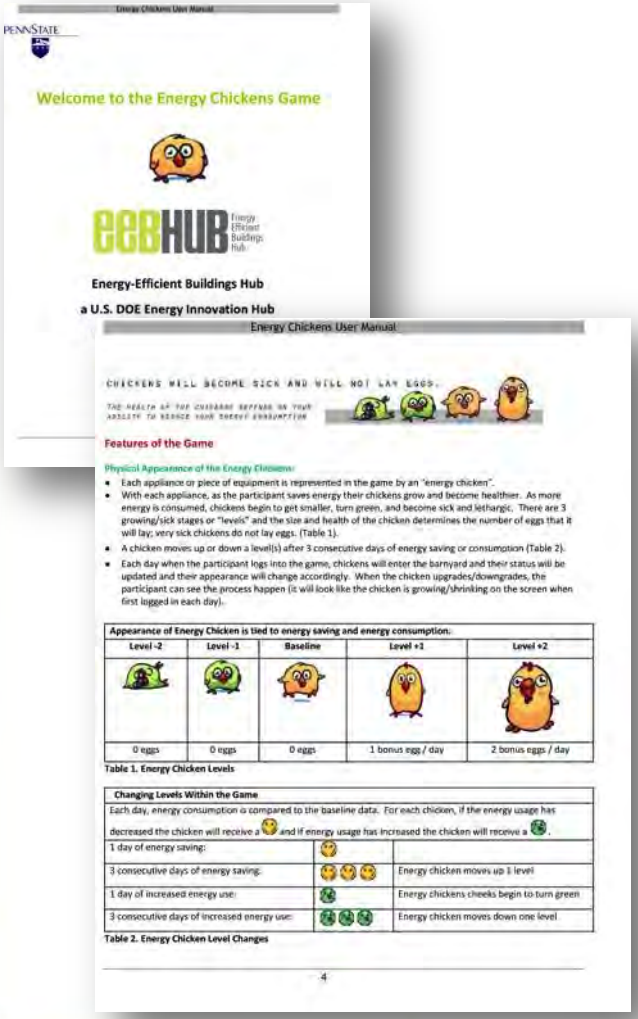
Turning off or adjusting settings for more power saving may result in healthy chickens.

Energy Chickens: Gains and Losses



- Three consecutive days of energy saving move chickens up one well-being level where they produce more eggs.
- Three consecutive days of excess use move chickens down a level.
- Accumulated eggs can be spent in a virtual store to decorate the chickens and barnyard—with hats, flowers, gnomes, and bouncy balls.

Deployment of EC and Training



Energy Chickens User Manual

Welcome to the Energy Chickens Game

Energy-Efficient Buildings Hub

a U.S. DOE Energy Innovation Hub

Energy Chickens User Manual

CHICKENS WILL BECOME SICK AND WILL NOT LAY EGGS.

Features of the Game

Physical Appearance of the Energy Chickens:

- Each appliance or piece of equipment is represented in the game by an "energy chicken".
- With each appliance, as the participant saves energy their chickens grow and become healthier. As more energy is consumed, chickens begin to get smaller, turn green, and become sick and lethargic. There are 3 growing/sick stages or "levels" and the size and health of the chicken determines the number of eggs that it will lay; very sick chickens do not lay eggs. (Table 1).
- A chicken moves up or down a level(s) after 3 consecutive days of energy saving or consumption (Table 2).
- Each day when the participant logs into the game, chickens will enter the barnyard and their status will be updated and their appearance will change accordingly. When the chicken upgrades/downgrades, the participant can see the process happen (it will look like the chicken is growing/shrinking on the screen when first logged in each day).

Appearance of Energy Chicken is tied to energy saving and energy consumption.				
Level -2	Level -1	Baseline	Level +1	Level +2
0 eggs	0 eggs	0 eggs	1 bonus egg / day	2 bonus eggs / day

Table 1. Energy Chicken Levels

Changing Levels Within the Game		
Each day, energy consumption is compared to the baseline data. For each chicken, if the energy usage has decreased the chicken will receive a and if energy usage has increased the chicken will receive a .		
1 day of energy saving:		
3 consecutive days of energy saving:		Energy chicken moves up 1 level
1 day of increased energy use:		Energy chickens cheeks begin to turn green
3 consecutive days of increased energy use:		Energy chicken moves down one level

Table 2. Energy Chicken Level Changes

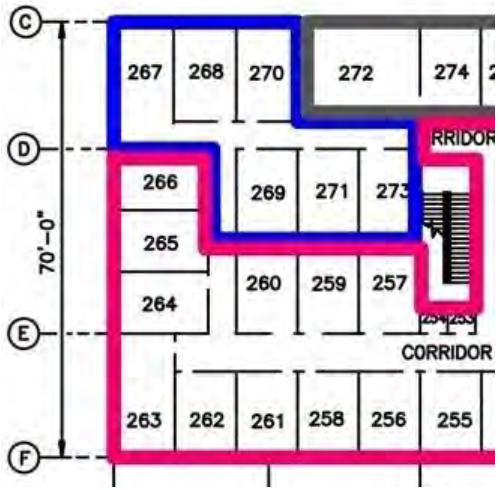
4

- Individual energy use was monitored for a baseline period before *Energy Chickens* was deployed
- Individual game participants were trained in the use of the *Energy Chickens* game
- The game ran for four weeks
- Additional screens and support tools were introduced periodically to maintain participant interest and reinforce energy saving behavior

Supporting Materials (Pledge, Posters)

- Other means of reinforcement were employed.
- Participants signed a pledge to take care of their chickens, thus saving energy
- A series of energy-saving posters was deployed, tied to *Energy Chickens* themes, a new series of posters each two weeks for the duration of the game

Results

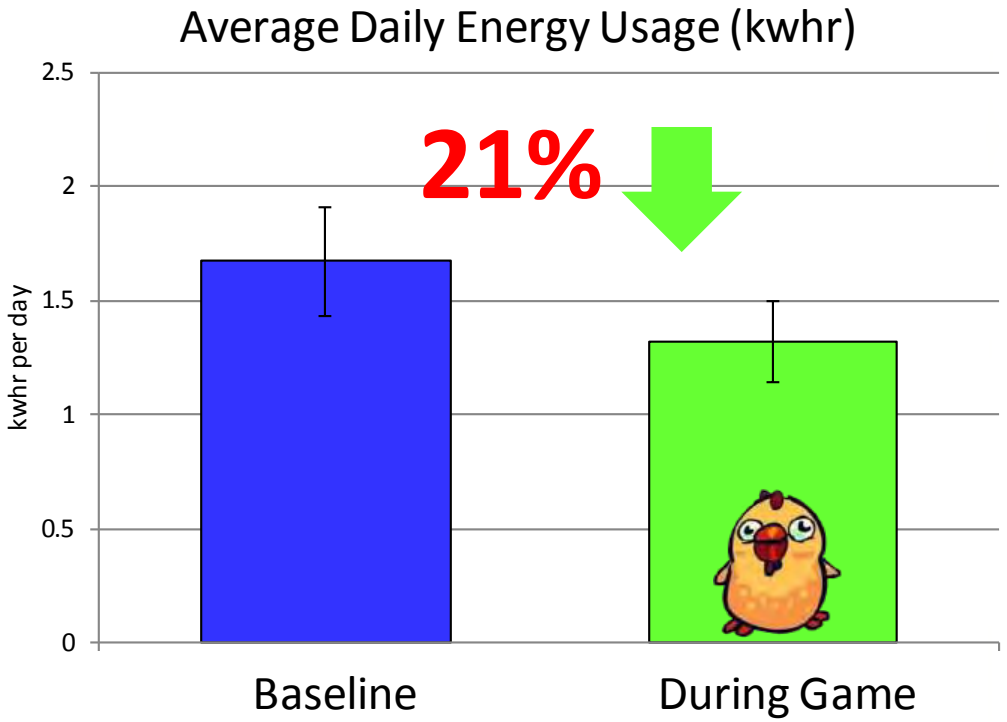


- 61 potential Energy Chickens participants
- 42 participants completed game
- 7 groups, 3-9 participants in each

- Phase 1 *Baseline monitoring*: 69 individuals consented to monitoring of their energy usage
- Phase 2 *Energy Chicken game intervention*: 45 individuals consented to participate in Energy Chicken game and accompanying occupant survey protocols—pre- and post-surveys plus daily phone surveys

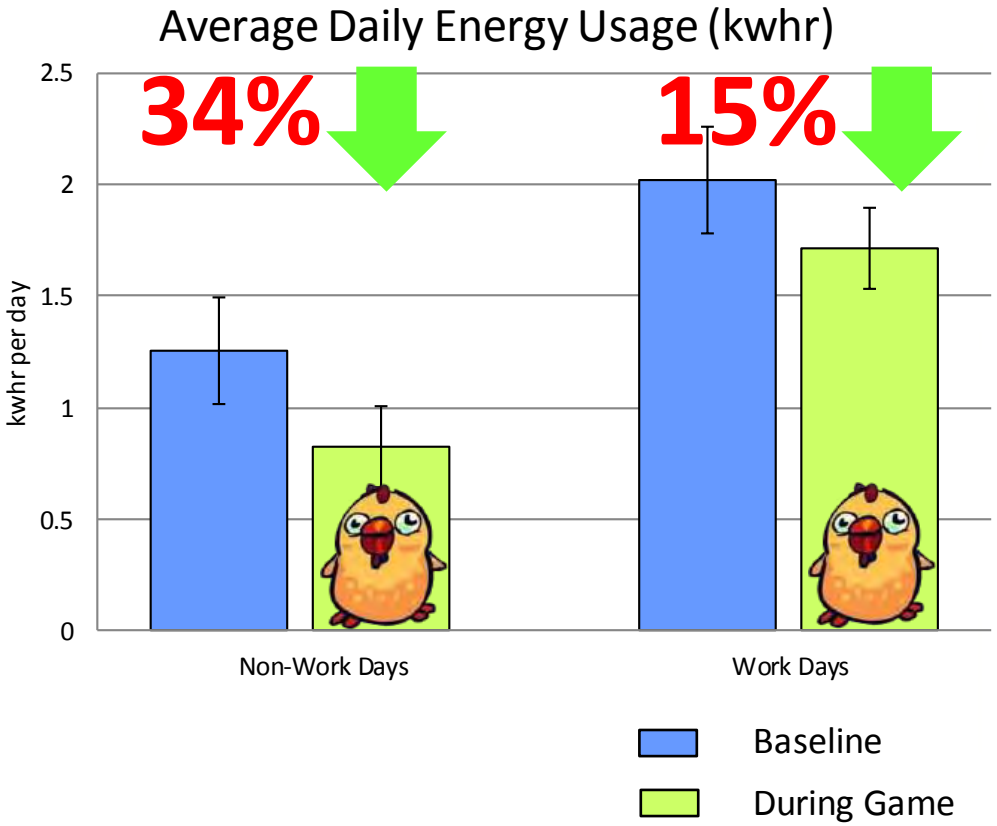
Overall Energy Saving

- 374 sensors deployed
- Devices ranged from desktop computers to pencil sharpeners, phone chargers and foot warmers



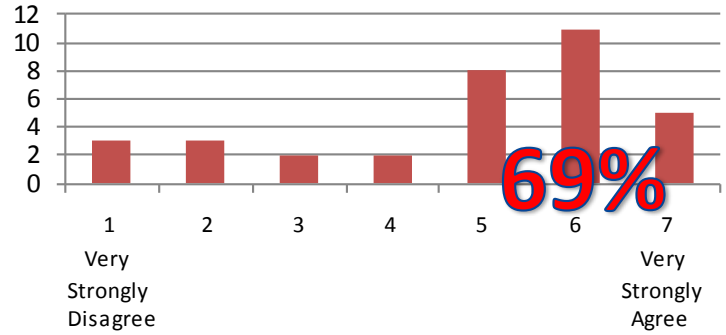
Results

- Greater energy savings were achieved over weekends when devices could be turned off without interfering with work

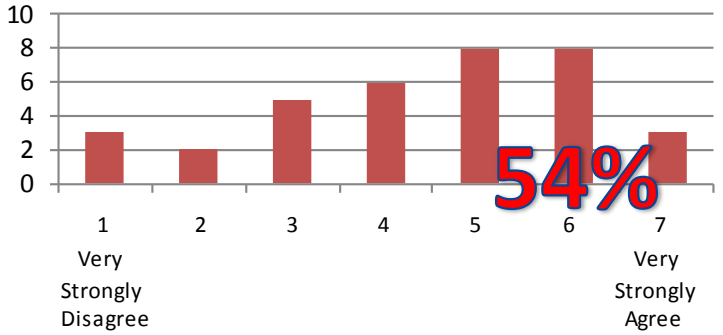


Game evaluation

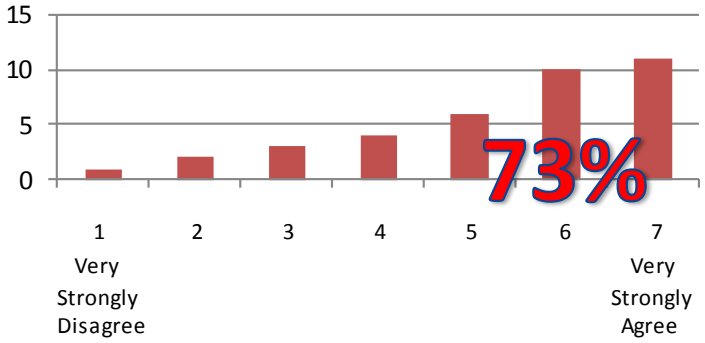
The game helps me be more energy conscious.



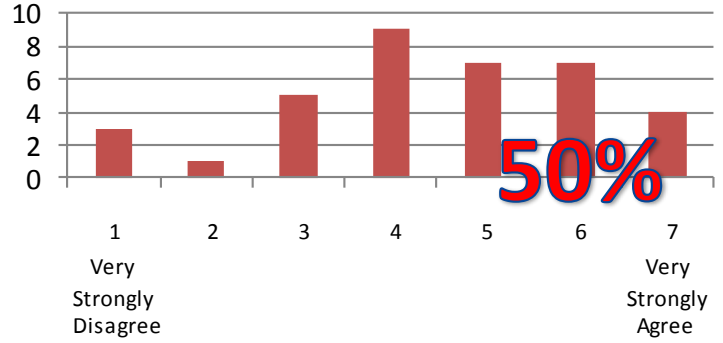
The system provided accurate information about my energy usage.



The game is easy to understand.



Overall, I am satisfied with this game.



Conclusions

- "I am happy to have participated in the energy chicken game. Having to check on my chickens and take the surveys increased my awareness of my energy usage. This made me mindful to turn things off at the end of the day which I did not do before, but now I will continue to do." *(anonymous respondent)*

PPPL PRINCETON PLASMA PHYSICS LABORATORY
A Collaborative National Center for Fusion & Plasma Research
U.S. DEPARTMENT OF ENERGY
WEEKLY
MONDAY, FEBRUARY 4, 2013

At PPPL THIS WEEK

TUESDAY, FEB. 5

Theory Seminar
10:45 a.m. ◆ T-169
Introduction to XGC
S. Ku

WEDNESDAY, FEB. 6

GFDL Events and Seminars
12 p.m. ◆ Geophysical Fluid Dynamics Laboratory (GFDL)
Smagorinsky Seminar Room
Labor capacity reduction from heat stress under climate warming
John Dunne (GFDL)
www.gfdl.noaa.gov/events
(Gov't, Univ. or 2 other forms of I.D. needed)

PPPL Colloquium
4:15 p.m. ◆ MBG Auditorium
Seismic Imaging and Inversion Based on Spectral-Element and Adjoint Methods
Jeroen Tromp, Princeton University
Refreshments at 4 p.m. in the LSB Lobby
Click here for link

THURSDAY, FEB. 7

Theory Seminar
11 a.m. ◆ Theory Conf. Room
Ed Thomas, Auburn University

SATURDAY, FEB. 9

Science on Saturday
9:30 a.m. ◆ MBG Auditorium
Finding a needle in a (genomic) haystack or how can computers help cure cancer
Olga G. Troyanskaya, Princeton Univ.

UPCOMING EVENTS...

Feb. 15
Young Women's Conference Application Deadline
http://science-education.pppl.gov/YWC

Feb. 22 - 23
DOE's NJ High School Science Bowl®
Contact Deedee Ortiz, x2785 or email dortiz@pppl.gov

inside

Director's Corner

Stewart Prager discusses possible impact of federal budget on PPPL

By **STEWART PRAGER** — Director, Princeton Plasma Physics Laboratory

Dear PPPL'ers,

Recently, many at the lab have asked me about the near-term budget and staff plans for PPPL. The answer is simple: we do not yet know the PPPL budget for 2013, but our plan for now is to continue with our current staffing level. It is remarkable that Congress has not yet passed a budget for this fiscal year, which began Oct. 1, 2012. There are several milestones to pass, as we all know from reading the newspaper - the postponed fiscal cliff (which if not resolved could reduce services broadly in the U.S.), the debt ceiling limit, and the passing of a budget. The uncertainty and gridlock in the federal budgeting process this year seem to be larger than at any time during the past several years.

The possible outcomes for PPPL in the near-term range from maintaining our current staff level to some amount of staff reduction (in the longer term, we continue to pursue options where we might be adding staff). We have some optimism, considering the various forces at work in Congress and DOE, that we will not have to reduce staff, but any staff reduction would begin with a voluntary retirement program. We are very fortunate that DOE is strongly committed to the NSTX-Upgrade project, yet the uncertainties are large, and no one knows what the final budget will be. We are watching the situation week-by-week and will respond to any new information as it becomes available. You can be sure that PPPL management, Princeton University management, and the fusion community at large are doing everything possible to maintain a strong fusion program and budget in these difficult legislative times. I will inform you of any new information as soon as it develops.

Stew C. Prag

Energy Chickens game makes saving energy fun

By Jeanne Jackson DeVoe

They're cute, they're silly and they're fun but now the energy chickens at PPPL have flown the coop after helping more than 40 employees cut energy costs by about 21 percent.

Researchers at Pennsylvania State University developed the game through the U.S. Department of Energy's Energy-Efficient Buildings Hub. The idea was to encourage employees to turn off their electronic devices. While the game has ended, the project will conclude at the end of March.

The preliminary results show PPPL participants reduced energy by 34 percent on weekends and by 15 percent on work days – meeting their pledge of reducing energy by at least that much. The pledge, which was signed by all participants, stated, "I pledge to keep my chickens healthy. I pledge to reduce my energy consumption. I will turn it off!"

continued on page 3

Dena Lang, a research associate at Penn State, shows the energy chickens game to Jim Graham.

Guest Corner

Help is a *click* away with work orders

By **MIKE VIOLA** — Head, PPPL Facilities and Site Services Division

If you see a light is out in a hallway or you need something as simple as hanging a picture up in your office, it's easy to get help from the Facilities Department by filling out a work order request using the steps below.

We respond to everything from water leaks to missing tiles. We get at least 400 requests a month, so it's important that you fill out the work order so we can keep track of your request.

How the work order works

Here's how the work order works: You start on the PPPL Employee Information Services page under the "Information and Services by Function" table and click on the second item in the second column "Work Order Requests and Work Order Status." This brings up a New Work Request form where your name, email and phone number are automatically filled in. Provide your location by pulling down the name of the building where you work under Property, find your room number under Asset and then give your location.

You can choose what type of work you need on the pull down menu under Service: such as general mechanics, HVAC, an electrician or janitor or a huge list of other choices. If you don't see what you need because all you want to do is to hang a picture or you just don't know – choose "other." Then write a brief description of what you need: "I want to hang a picture," and give your location again in the description. When you're finished, click on "Create Request." You should get an email within a few minutes confirming that you've sent your request.

Linda Harmon, Facilities' data assistant coordinator, checks the work orders several times a day, prints them out and then hands off the requests to the appropriate technician. The technicians also must fill out a job hazards analysis for every work request on the back of the work order request form.

After the technician or staff member finishes a job, the Facilities Department technician will return the work order form with details on whether the job was completed, how much time it took, the materials he or she used, etc.

If you have a last-minute request, a question regarding the work orders, or an emergency, please email Linda at lharmon@pppl.gov or call her on extension 2588. Please do not use a work order for general information! We will try to accommodate all requests, however PPPL staff should provide sufficient notice to allow time for a reasonable response e.g. send work orders to set up for special events two weeks prior to the event, if possible.

Please be patient after you've put in your work order. We will get to it as soon as we can. Keep in mind that requests involving safety issues get first priority. We're also always working on routine preventive maintenance to keep everything – including our heating and cooling systems – running smoothly. We have more than 25 technicians and other staff working hard to keep our buildings going, including electrical technicians, general mechanics, HVAC, janitorial staff and operations.

Facilities needs all the information on the work orders for even simple tasks because we have to submit all this information to the Department of Energy at the end of the fiscal year. The work order system, which is called Micro Main, provides a report that tells us how many hours or man days were spent working in each of PPPL's approximately 35 buildings. The DOE uses that information to determine how much it costs to maintain our buildings.

The Facilities Department truly relies on PPPL staff members to be our eyes and ears in PPPL's buildings because we can't be everywhere at once. We welcome work orders for anything that needs to be repaired so we can respond properly.

Boy Scouts visit PPPL

John DeLooper, (right), head of Best Practices and Outreach, speaks to members of Boy Scout Troop 46 from Belle Mead, and their parents in the NSTX Control Room during an evening tour on Jan. 28. The Scouts take the tour as part of their earning a nuclear science badge (inset).

Energy chickens

continued from page 1

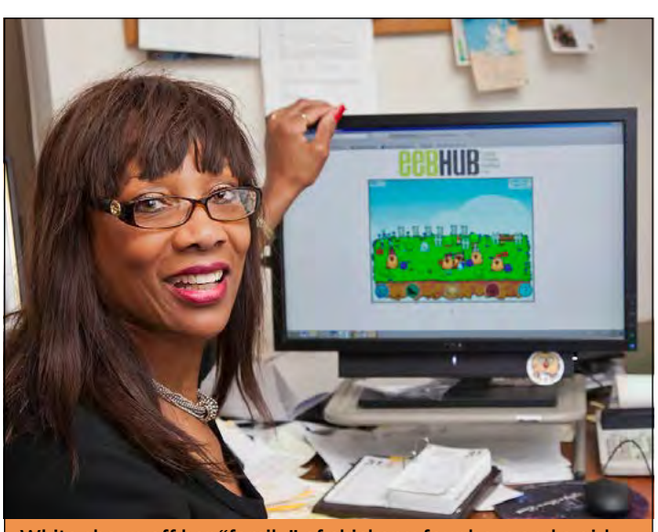
The project began in September when plug load monitors were installed to record the energy use of 61 participants' devices. Those participants took brief surveys twice a day on their well-being and other issues on special cell phones provided to them. The project also began using plug load monitors to record the energy use of participants' devices. In the second phase, which started in mid-October, the energy chickens game started up and ran through Jan. 31, with time added to make up for interruptions caused by Hurricane Sandy. The game used the baseline results from the beginning of the project and compared them with the daily energy use of participants who signed up for the game. Participants received energy chicken stickers reminding them to "Turn it off!"

Researchers also placed posters around the Laboratory to raise awareness of how much energy appliances use. Many appliances, like computer loudspeakers and printers, continue using power even when they're not being used, and the posters said that in general 40 percent of office energy use is from these devices, called plug loads.

Dena Lang, a research associate at Penn State who is in charge of the project, said she is pleased with the outcome so far. "I'm very happy with the initial results as they have exceeded our expectations based on findings reported in the literature from similar studies," she said. She noted that the project is unique in using a video game to induce people to reduce energy. While funding for the project has ended, Lang said that her team is looking at ways to promote adoption of such games on a larger scale.

The game connects each person's electric devices to one energy chicken so a player with four devices would have four chickens. Arlene White, the principal buyer/small business liaison at PPPL, has grown very attached to her flock of chickens. "This is my family and there's one girl and four boys," she said proudly when showing them off. "I gave the girl a bow."

White's five chickens were connected to her devices – her two computer monitors, her PC, her printer and the task lights above her desk. They act as both the carrot and the stick for conserving energy. The stick is that players like White wind up with a sick chicken if they don't turn off their devices. The chickens shrink and turn green and eventually keel over and won't lay eggs until they revive. White found that out the hard way one day when she forgot to turn off her devices while she was at an all-day meeting and found a flock of ailing chickens the next day. It prompted her to take action. "I was upset. I shut everything off. I can't have these chickens dying," she said.



White shows off her "family" of chickens: four boys and a girl with a bow.

Arlene White used the eggs she earned saving energy to buy her flock of chickens hats and bouncing balls and even a diving mask. She decorated her barnyard with Greek columns and statues.

The game's carrot is the eggs the healthy chickens lay when they reduce energy, which get harder and harder to earn as the game goes on. (They also received $75 cash at the end of the study). White managed to earn 1,745 eggs and she "spent" the eggs lavishly at the game's "store." She decked out her chickens with funny hats and a diving mask and bought them bouncing balls to play with. Then she went to work decorating their little yard. The décor includes a fence and flowers, statues and even Greek columns. And what yard would be complete without a snowman and a garden gnome? "You have to have a gnome," she said.

And the energy chickens have had their intended effect. "It really has made me more aware," said White. "Even when I run to the copy machine, I turn my monitors off."

The idea for "Energy Chickens" came from "serious games" — video games designed for business purposes, such as training employees. It's also based on other virtual pet games that have been popular with kids for years and are being adapted to encourage people to change their behavior. There is a virtual pet designed to encourage diabetic children to take their medicine, for example, and another designed to provide company to older people in nursing homes. Virtual pets work by encouraging players to form a bond with their "pets" that can prompt them to change their behavior.

Leanna Meyer, an environmental engineering associate who worked on the project at PPPL, said some people were more attached to the energy chickens than others. "Some people were more in tune with it," she said. "I think it was really popular with the ladies. It was a competition and they were doing it in their group."

The 42 people who participated in the game were all in the Lyman Spitzer Building and Mod 6, Meyer said. They were divided into seven areas and the game allowed players to see how chickens were doing in their group and how they were doing in other groups, which were all given colors.

Jim Graham, manager of Best Practices, was not as enamored of his chickens as White but he managed to keep three chickens connected to his computer, his fan and his telephone pretty healthy. He bought them hats, and put up a picket fence piece by piece around the property.

Graham said he sometimes grumbled when the special cell phone would buzz him to ask him whether he had logged on to the game. "The positive thing that came out of it is I started paying attention to turning things off – even at home, especially at home," he said. "When I leave one room and go to another I turn things off."

He has even gotten his wife to conserve energy. "I said, 'Turn off the kitchen lights, we're not using them anymore,'" he recalled. "And she called me a pain in the neck. But the next time she turned off the lights!"

Welcome PPPL New Hires

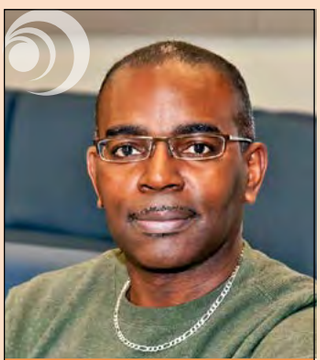
PPPL welcomes the newly hired employees pictured below who have joined our staff recently.

ANGELA CAPECE
Associate Research Physicist
Plasma Science and Technology

JOHN DELLAS
Electrical Engineer
Engineering & Infrastructure

ARTURO DOMINGUEZ
Postdoctoral Fellow
Science Education

JANE FENG
Accounts Payable
Business Operations



LA MONT FOREMAN SR.
Accounts Payable
Business Operations

ROB HAGER
Associate Research Physicist
Theory

RAJESH MAINGI
Department Head
Edge Physics & PFC Research

ENRIQUE MERINO
Technical Associate
LTX

MORGAN STYER
Welding Engineer
Engineering & Infrastructure

ZHIRUI WANG
Associate Research Physicist
NSTX

HELEN WOJTENKO
Staff Accountant
Business Operations

JINXING ZHENG
Visiting Physicist
Theory

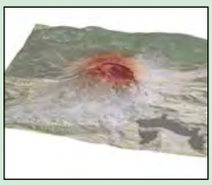
Facemask Testing

Industrial Hygienist Samantha Burrows tests the self-contained breathing apparatus respirator of Emergency Services Officer Paul Sobke. All of the officers have their respirators ested each year to make sure the seal works properly and does not allow airborne toxins other chemicals to enter the respirator.

Photo by Sandy Shaw/ Site Protection Division

FEB. 9	**FINDING A NEEDLE IN A (GENOMIC) HAYSTACK OR HOW CAN COMPUTERS HELP CURE CANCER** by Prof. Olga G. Troyanskaya, Lewis-Sigler Institute for Integrative Genomics and Department of Computer Science, Princeton University
FEB. 16	**FROM ROBOT SOCCER TO AUTOMOTIVE SAFETY: AN OPTICAL TOUR** by Prof. R. Andrew Hicks, Department of Mathematics, Drexel University
FEB. 23	**NO LECTURE — DOE'S NJ HIGH SCHOOL SCIENCE BOWL®**
MAR. 2	**LIGHT AND NANOTECHNOLOGY — ENGINEERING AND SO MUCH MORE** by Prof. Claire Gmachl, Department of Electrical Engineering, Princeton University
MAR. 9	**A SHORT HISTORY OF LENGTH** by Prof. Joel Langer, Department of Mathematics, Case Western Reserve University
MAR. 16	**A ROBOT'S VIEW OF OUR OCEAN PLANET** by Josh Kohut, Assistant Professor of Oceanography, Center for Coastal Physical Oceanography, Rutgers University

COLLOQUIUM



Seismic Imaging and Inversion Based on Spectral-Element and Adjoint Methods

JEROEN TROMP
Princeton University

Wednesday, February 6

4:15 p.m. (Coffee/Tea at 4 p.m.)
M.B.G Auditorium, Lyman Spitzer Building

Thank you for your donations to United Way!

*PPPL employees contributed a total of **$31,914** to the PPPL and Princeton University United Way campaign. Thank you to all who donated!*

United Way

Finding A Needle In a (Genomic) Haystack or How Can Computers Help Cure Cancer

OLGA G. TROYANSKAYA
Princeton University

Saturday, Feb. 9 • 9:30 a.m. • M.B.G. Auditorium

Volunteers Needed

PPPL will host 48 teams of middle and high school students (about 250 students total) on Friday & Saturday, Feb. 22-23 at the New Jersey Regional Middle and High School Science Bowls.

U.S. Department of Energy NATIONAL SCIENCE BOWL®

WE NEED YOUR HELP!

We are hoping to find: moderators, science/rules judges, time/score keepers, lunch attendants, etc.
Won't you please consider volunteering your time?
Lunch provided for competition day volunteers. Contact Deedee Ortiz @ 2785 or **dortiz@pppl.gov**, to sign up or for more information.

Brock PPPL Café Menu

BREAKFAST ..... 7 a.m. • 10 a.m.
CONTINENTAL BREAKFAST..... 10 a.m. • 11:30 a.m.
LUNCH ..... 11:30 a.m. • 1:30 p.m.
SNACK SERVICE ..... until 2:30 p.m.

— Mark Gazo, Chef Manager

	MONDAY FEB. 4	**TUESDAY** FEB. 5	**WEDNESDAY** FEB. 6	**THURSDAY** FEB. 7	**FRIDAY** FEB. 8
COMMAND PERFORMANCE CHEF'S FEATURE	 **POTATO & CHEESE PIEROGIES**	 **EGGPLANT PARMESAN LASAGNA**	 **BAKED MACARONI & CHEESE**	 **BBQ CHICKEN WITH CORN ON THE COB**	 **BAKED TILAPIA**
EARLY RISER	Greek Omelet with Spinach, Tomato & Feta Cheese	Cranberry Pancakes	Steak, Egg & Cheese Quesadilla	Ham, Egg & Cheese Bagel	Sausage, Egg & Cheese Croissant
COUNTRY KETTLE	Italian Wedding Soup	Beef Barley	Turkey Chili with Beans	Pasta e Fagioli	New England Clam Chowder
GRILLE SPECIAL	Chicken Tenders & Fries with Honey Mustard	Hot Pastrami & Cheddar on Rye served with Cole Slaw	Chicken Cutlet, Ham, Swiss & Dijonnaise Baguette with Fries	Italian Hot Dog served with Onion Rings	Falafal served with Tzaziki Sauce and Chick Pea Salad
DELI SPECIAL	Peppered Ham & Muenster Cheese on a Kaiser Roll	Chicken Salad & Bacon Wrap	Six Foot Hoagie	Ham Salad Croissant	Roasted Vegetables & Feta Cheese Torpedo
PANINI	3 Cheese & Ham Griller on Ciabatta Bread	Turkey, Bacon, Tomato, Pesto Mayonnaise Baguette	Crispy BBQ Chicken Sandwich	Meatloaf, Cheddar Cheese Torpedo	Alfredo Florentine Chicken Panini

MENU SUBJECT TO CHANGE WITHOUT NOTICE

CLICK HERE FOR A PRINTABLE WEEKLY MENU

WEEKLY

Editor: **Jeanne Jackson DeVoe** ◆ Layout and graphic design: **Gregory J. Czechowicz**
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The **PPPL WEEKLY** is published by the PPPL Office of Communications on Mondays throughout the year except for holidays. Deadline for calendar item submissions is noon on Thursday. Other stories should be submitted no later than noon on Wednesday. Comments: commteam@pppl.gov ◆ **PPPL WEEKLY** is archived on the web at: http://www.pppl.gov/ppplweekly.cfm