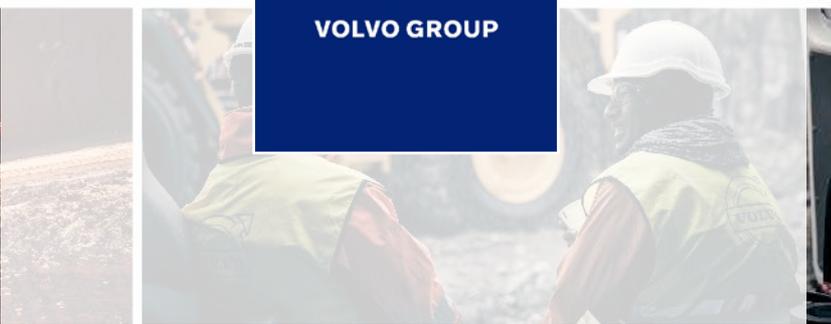


# Engaging Human Resources in Improving Energy Performance



**Bert Hill**  
**2018 World Energy Engineering Congress**  
**Charlotte, NC**

# The Volvo Group and Sustainability



# Volvo Group North America Energy Management Highlights

2012 – Volvo Trucks New River Valley Plant is the first facility in the U.S. to achieve dual ISO 50001/Superior Energy Performance certification (Platinum). Re-certified Platinum in 2015 and 2018.

2013 – Mack Trucks Lehigh Valley Operations Plant achieves ISO 50001/SEP certification (Platinum). Re-certified Platinum in 2016.

2014 – Volvo Group Trucks Operations Hagerstown, MD Powertrain Plant achieves ISO 50001/SEP certification (Platinum). Re-certified Platinum in 2017.

# Volvo Group North America Energy Program Focus



# Energy Treasure Hunts



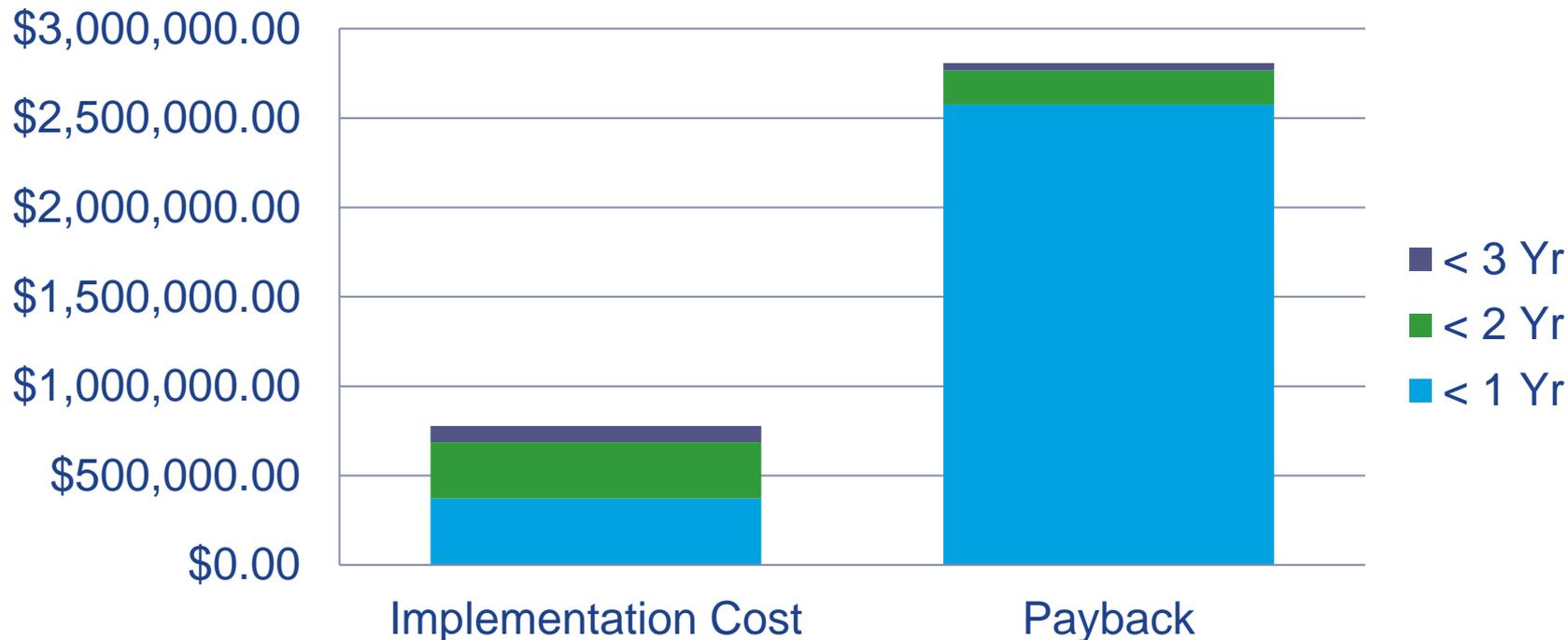
- Focus on operational and behavioral opportunities
  - Turning off equipment when not in use
  - Changing set points
  - Automating shutdowns
  - Reducing load on the equipment

# Advantages of a Treasure Hunt

- A Treasure Hunt Exchange encompasses both training and a “hunt”
  - Does not require sophisticated technical analysis
  - Calculations are (relatively) simple
  - Can be applied by employees of varying disciplines
  - Train selected participants to facilitate future treasure hunts
- A three day activity – at completion, the facility has sufficient information to execute identified opportunities and an employee who can facilitate future treasure hunts within the organization
- Opportunities/ideas are solicited from many disciplines and can be replicated across similar processes and businesses

90% of opportunities identified have < 1 year paybacks

## Identified Opportunity



# Energy Awareness and Engagement Program

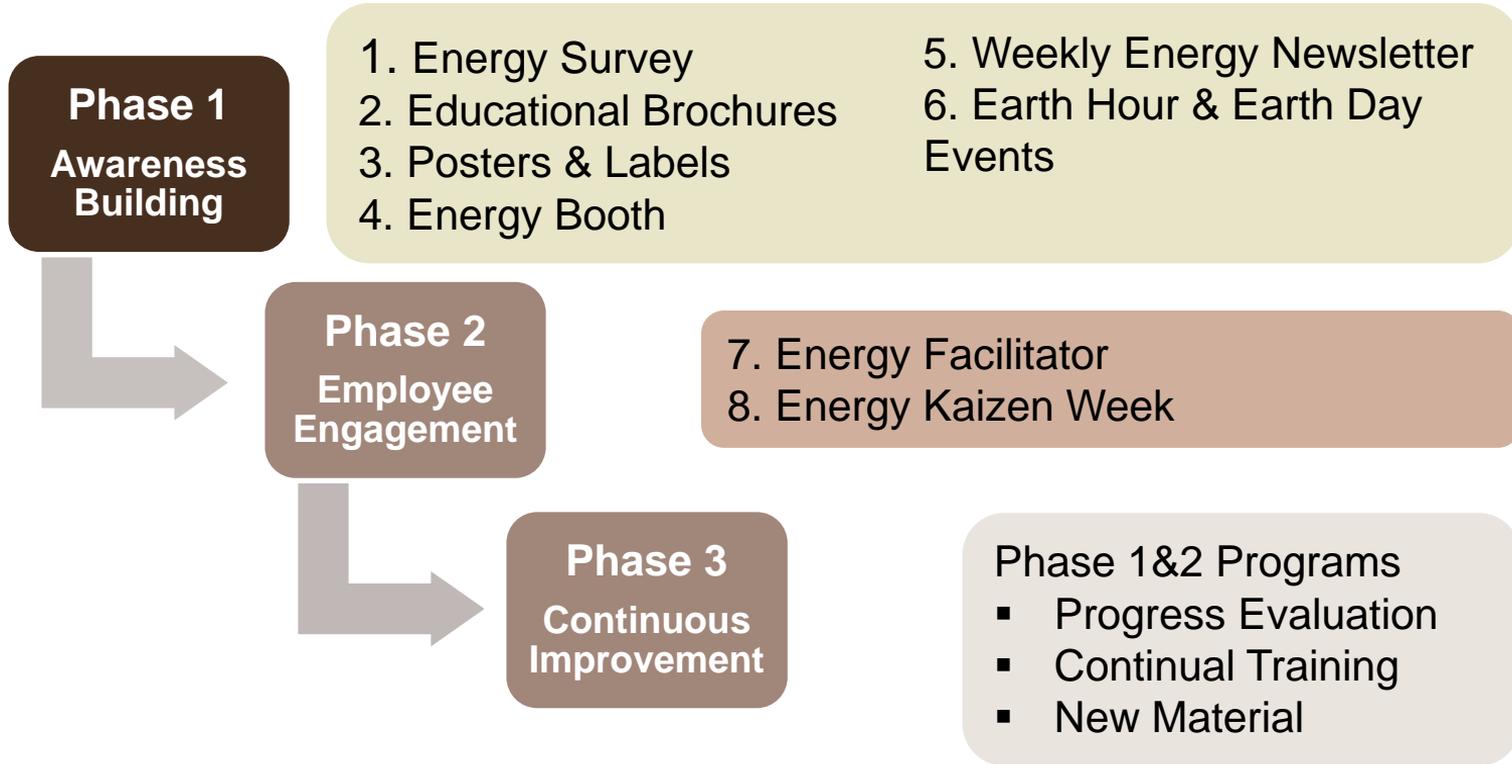
- Enlisted an EDF Climate Corps Fellow to design an Energy Awareness and Engagement Program
- Program comprises a framework, tools/templates and implementation schedule
- Program design based primarily on our three largest plants – 85% of U.S. energy use
- Development involved Energy, HSE, HR, Real Estate, Operations, Communications, Labor relations and Union representatives from five plants and corporate functions



Shuqi Dong



# Program Overview



# Energy Survey Design

- Anonymous optional; enter name for a drawing of rewards
- 13-Question Survey with a comment section

## Four Sections:

- Employee Awareness ( 3 questions)
- Employee Participation (4 questions)
- Energy Support Activities (2 questions)
- Workplace Support and Participation (4 questions)



VOLVO GROUP NORTH AMERICA

## ENERGY AWARENESS & ENGAGEMENT

Our Hagerstown plant was recognized as the winner of the Maryland Green Registry award for our exceptional environmental and sustainable business practices. To take our achievements to the next level, Volvo Group North America's Health, Safety and Environmental (HSE) Group, in cooperation with the 2018 EDF Climate Corps, are developing an energy program that can save our Hagerstown Plant up to 15% -- \$825,000 more in energy cost.

Hagerstown employees are invited to participate in an energy conservation survey, and for your time, you will be eligible to win one of 10 prizes allocated to Hagerstown employees.

[CLICK HERE TO PARTICIPATE](#)

or go to [www.mentf.com](http://www.mentf.com) | use code 15091

**SURVEY OPEN NOW UNTIL TUESDAY, JULY 24**  
PRIZE WINNERS ANNOUNCED THURSDAY, JULY 26.



1 LEGO TRUCK

9 BEACH TOWELS



## LVO News

Lehigh Valley Operations



A NEWSLETTER FOR EMPLOYEES WITHIN GROUP TRUCKS OPERATIONS, LEHIGH VALLEY OPERATIONS

July 12, 2018 -- Week 28.4

**DRAFT FOR REVIEW -- DO NOT DISTRIBUTE**

### Energy Program Survey and Prize Raffle

Volvo's Health, Safety and Environmental (HSE) group and the Environmental Defense Fund (EDF) Climate Corps are designing an Energy Program for the Lehigh Valley Operations (LVO), Hagerstown Powertrain (HAG) and New River Valley (NRV) sites, and would like your input! The goal is to design a program that informs and educates employees about energy efficiency and cost savings at our manufacturing sites, while also providing employees with information they can use to save energy and lower energy costs at home.

All survey responses will remain anonymous. The Energy Program team will use findings from the survey in the program's overall design. They have created an employee survey with questions on energy conservation and usage. The survey will provide the Energy Program team with useful data, while also giving employees a chance to voice their opinion -- and an opportunity to enter a raffle for prizes from the Mack Shop!

There are no right or wrong answers -- we want to hear your opinions. Respondents who completely fill out the survey (on page two of this newsletter) are eligible to enter the raffle. Survey entry forms will also be located next to the drop boxes at the following locations:

LVO: Table in Front of Dispensary, F-7 Break Area, Break Area near MPC Room  
MCC: Cafeteria  
LVLC: Main Break Room

One entry per person. Please include your first and last name and phone number so we can contact you if you win. Survey deadline is close of business Tuesday, July 24. Good luck!



First Prize: Grizzly Personal Cooler  
Second Prize: Mack Igloo Playmate Cooler  
Third Prize: Reusable Metal Tumbler  
Fourth Prize: Reusable Spill-proof Water Bottle  
Fifth Prize: Magnetic Metal Flashlight

More %

# Energy Survey Results

- Results from two plants (n = 500) show:
  - **98%** employees believe energy conservation is important and has a positive attitude towards it
  - Nearly **half** feels motivated to save energy at work
  - Employees want to learn about how to save energy at home
  - **60%** employees think energy saving tips aren't available to them at work
- Survey distribution via both web & paper copy is the most effective way
- Employees want to learn more but don't think resources are always available or easily accessible
- HAG employees hope to see more visual displays and educational materials, while LVO employees are more interested in training/workshops, games and contests

# Educational Brochure Template

## How Can I help save Energy at Work?

Here are a few simple things you can do to help reduce energy consumption at work:

- Turn off the lights every time you leave a conference room
- Turn off computer monitors during lunch breaks & at the end of the day
- Close the doors behind you to prevent heat & cool air from escaping
- Find and report air leaks
- Turn off point-of-use fans during breaks and shift changes
- Turn off air to nonproductive equipment
- Turn off equipment when not needed
- Submit energy saving ideas to the environmental team

**VOLVO**

Insert Program Logo  
and Slogan Here.

## Energy Awareness & Engagement Program



The Volvo Group has pledged to reduce its energy intensity by 25% or more by 2020.

To this end, **Insert Facility Name's** intention is to become carbon neutral on its operations.

Having achieved the ISO 50001 and the Superior Energy Performance (SEP) certifications, now it is time that we take our achievements to the next level – by focusing on the behavioral and operational aspects of energy saving opportunities.

## Why should we care about saving energy at work?

Doing everything we can to conserve energy leads to a **cleaner, healthier,** and **safer** environment;

Volvo's business is dependent on **environmental sustainability;**

It is **good business** and good for **our business;**

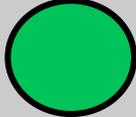
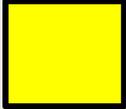
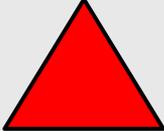
Our employees' **awareness** and **engagement** in energy conservation are necessary for **success;**

By minding our behaviors and actively trying to save energy at work, we can have significant positive impact to **increase company profit** and **improve the environment;**

It is the **right** thing to do

Have questions? Contact **Insert Energy Manager Name** at **xxx@volvo.com.**

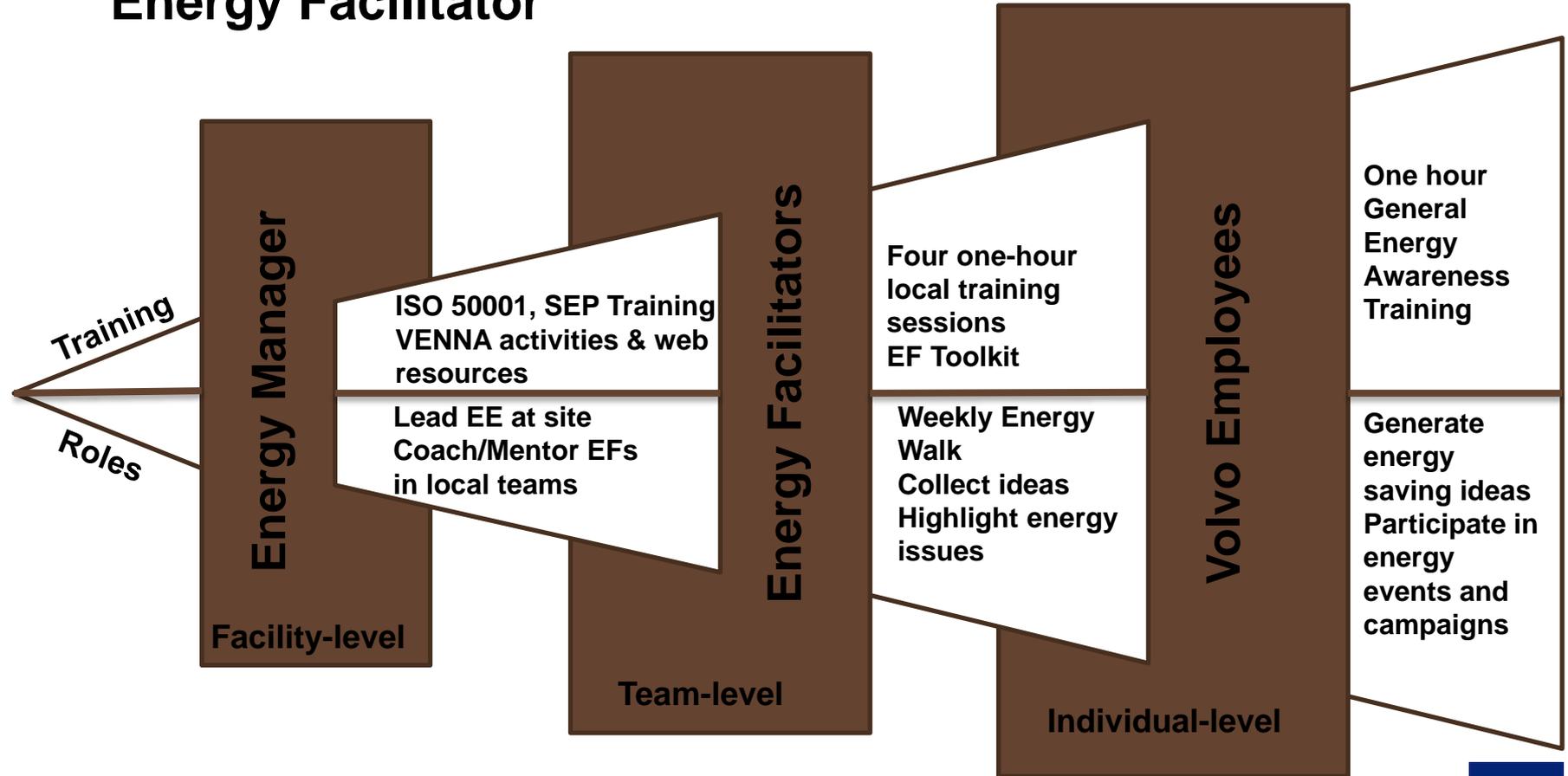
# Equipment and Machinery Labeling

Skill Level	Description	Example	Symbol
No Skill / everyone	Behaviors that can be intuitively adopted even without previous experience	Turn off fans, close doors, report air leaks, turn off TV	
Low Skill / supervisor, trained operators	Need to look at/ask for instructions, but fairly easy to perform and repeat when needed	Turn off tools, motors, pumps	
Medium Skill / maintenance	Individuals should carefully follow instructions. In addition, the performance of the behavior requires practical/physical skill, and in some cases the use of tools	Turn off exhaust fans, repair compressed air leaks	
High Skill / engineer	Almost always need professional help	Modify paint booth set point temperature, operate on robots, CNC machines	

# Energy Facilitator

- Team-level, partial, voluntary role
- Could be either a permanent role **or** a quarterly/annually rotational role
- Energy facilitator Tools & Resources
  - Orientation Training & Continual Trainings
  - Departmental Energy Checklist
  - Reference group: Site Energy Go Team

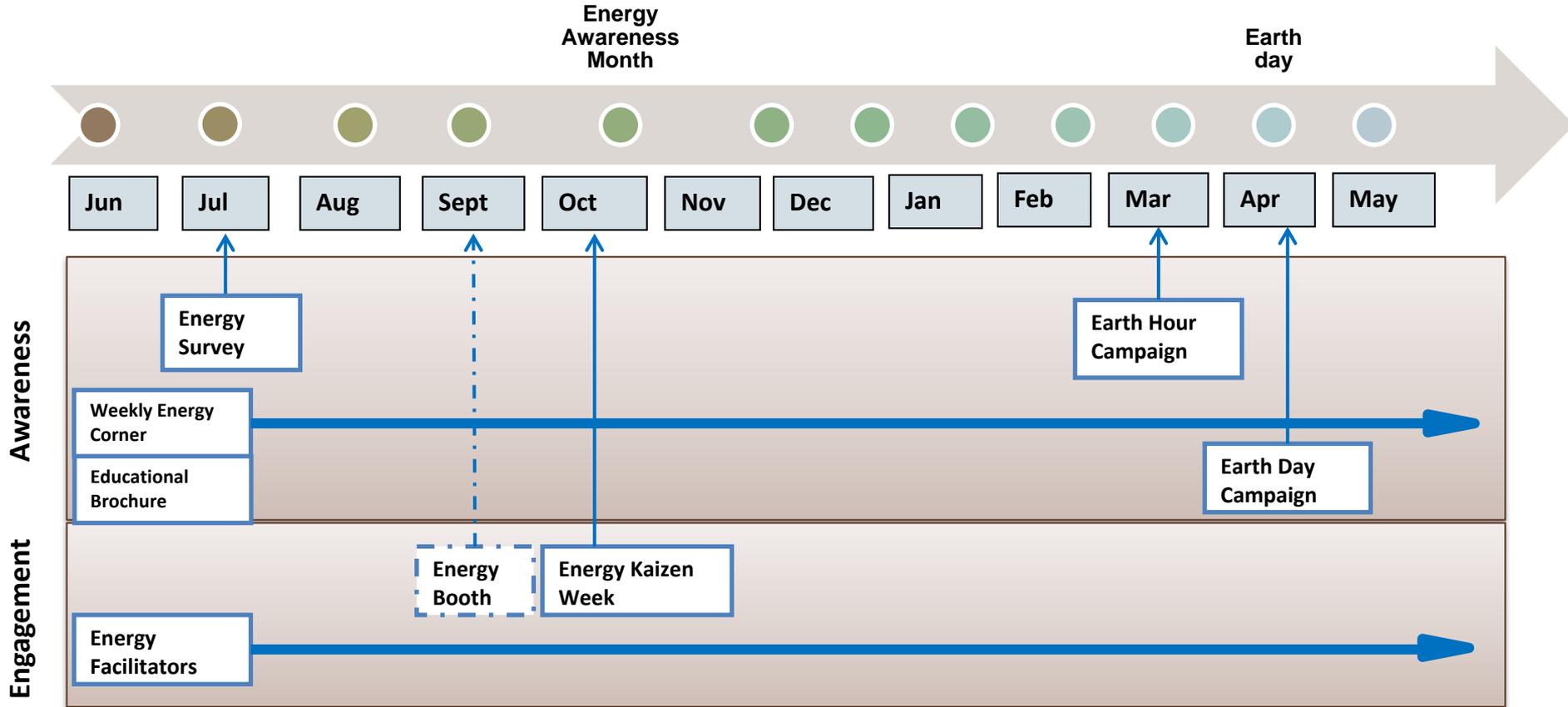
# Energy Facilitator



# Energy Kaizen Week

- A rapid improvement effort where a cross-functional group focuses and attacks operational energy efficiency as an area in need of improvement
- Focus on the **operational** aspect of energy efficiency, and the **operators** will be the major players
- Contestants will be provided a competition toolkit including: kickoff workshop, reference group, DOE cheat sheet, DOE opportunity sheet, DOE calculation sheet, proposal templates

# Energy Program Implementation schedule

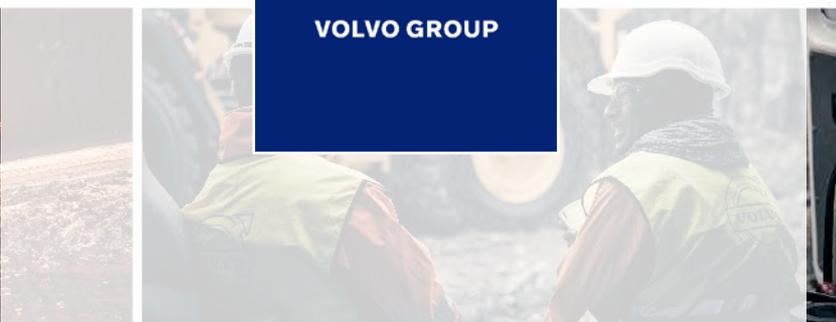
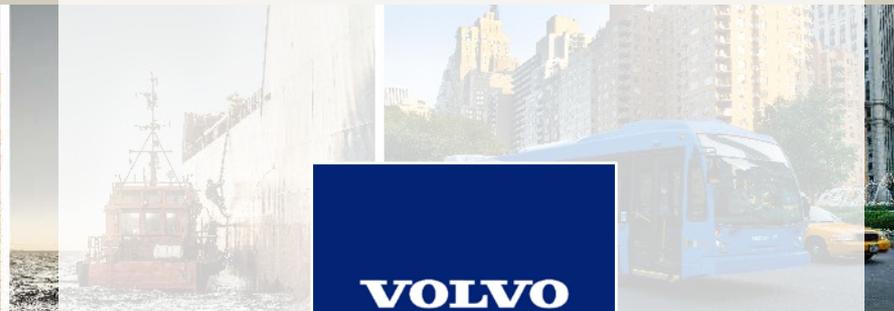


# Program metrics

- Number of responses to the energy survey
- Survey Results (statistical information)
- Number of energy Kaizen submitted
- Energy savings from energy Kaizens

# Human resources





**VOLVO**  
VOLVO GROUP

**Thank You!**