Welcome to the LIFE Webinar Series.
We will be starting soon.
The Low-Income Forum on Energy Presents:

National Energy Foundation’s National Energy Literacy Survey

Elissa Richards and Gary Swan
National Energy Foundation

November 15, 2018
1:30 p.m. – 2:30 p.m. ET
LIFE, the Low-Income Forum on Energy, is a unique statewide dialogue that brings together organizations and individuals committed to addressing the challenges and opportunities facing low-income New Yorkers as they seek safe, affordable and reliable energy.

Supported by the New York State Public Service Commission and the New York State Energy Research and Development Authority (NYSERDA), the LIFE dialogue encourages an interactive exchange of information and collaboration among the programs and resources that assist low-income energy consumers.
→ Monthly webinars
  - December - TBD
  - Update on the ALICE Report
    Wednesday, January 23, 2019, 1:30 - 2:30 p.m. ET

→ Monthly email newsletter
  Sign up at nyserda.ny.gov/LIFE – “Join the email list.”

→ Social media
  LinkedIn: Low-Income Forum on Energy
  Twitter: @LIFEnys
Find more information on the website
nyserda.ny.gov/LIFE

Join the mailing list
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Newsletter suggestions, webinar ideas, event announcements
LIFE@nyserda.ny.gov

Contact LIFE
Phone: 866-697-3732 – Request “Low-Income Forum on Energy”
Email: LIFE@nyserda.ny.gov
Asking Questions During Today’s Webinar

Click on the small arrow to the left of “Q&A” to open the text field. Type your question into the text field and click “send.”
1. Click on the “Chat” icon on the bottom menu to activate the chat function.
2. The chat function will appear in the middle right portion of your screen.
Based in Salt Lake City

Board of Directors in D.C.

42 year track record

Directors from NEI, EEI, AGA, other industry organizations

Energy Literacy
Programs

In-class presentations
Professional development workshops
Student competitions
Materials distribution
Websites, electronic posters
"Thank YOU so much for the AMAZING afternoon! Our school LOVED the Think! Energy presentation, and the kids were jumping up and down with excitement … It was nothing short of a home run! We LOVED both presenters, and they were absolutely outstanding. Please let them know what an amazing experience we had from their enthusiasm and excitement for science. They were awesome!"
Knowledge
Measure students’ understanding of a broad array of energy concepts

Attitudes
Identify common attitudes and perceptions toward energy

Behavior
Understand common actions and behaviors taken as it relates to energy
Survey Objectives

- Take a national snapshot – high school seniors
- Create comprehensive, balanced approach
- Verify need, identify gaps
- Raise profile of energy literacy
Target Participants

2,005 participants - National

Why high school seniors?

- K-12 experience
- New voters
- Energy customers
- Higher education/workforce
Knowledge
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Energy Literacy Score Distribution

Average Score: 48.8
Minimum Score: 3.3
Maximum Score: 90.9
Score Range:
- 0-9: 1%
- 10-19: 8%
- 20-29: 17%
- 30-39: 23%
- 40-49: 20%
- 50-59: 16%
- 60-69: 7%
- 70-79: 2%
- 80-90: 0.1%
- 90-100: 0.1%

Counts

Science ACT Distribution
Math SAT Distribution
LSAT Distribution
Geography
Household Income

- Less than $15,000: 52
- $15,000 to $24,999: 48
- $25,000 to $49,999: 45
- $50,000 to $74,999: 50
- $75,000 to $99,999: 50
- $100,000 to $149,999: 43
- More than $150,000: 54
Political Affiliation

- Very Conservative
- Somewhat Conservative
- Moderate
- Somewhat Liberal
- Very Liberal
- Don't Know
Question:
Most power plants being built in the U.S. today are designed to use which fuel?
Question:

In the past five years, both production and consumption of which resource has decreased in the U.S.?

- Petroleum: 20%
- Coal (correct): 54%
- Natural Gas: 16%
- Wind: 4%
- Solar: 6%
Question:
The term renewable energy means that a resource:

- Is free and... 12%
- Is very... 28%
- Does not... 13%
- Can be... 15%
- Is a non... 32%
Question:
Which of the following is a renewable energy resource?
Question:
Which three resources provided 86% of the electricity generated in the U.S. in 2015?
Question:
Which of the following uses the most energy in the average American home annually?
Question:

What percentage of the U.S. overall energy consumption is used for transportation?

- 10-15 percent
- 25-30 percent (correct)
- 40-45 percent
- 55-60 percent
- 70-75 percent
Question:
Per capita energy usage in the United States since 2003 has:
Question:
In the past ten years, petroleum imports into the U.S. have:

- Decreased (correct) 44%
- Increased 56%
Question:
Which of the following does NOT promote energy savings?

- Using a space heater (correct)
- Using a high-efficiency shower head
- Keeping your furnace filter clean
- Using LEDs

57% 17% 13% 13%
Question:
Which of the following are possible economic impacts of increased energy production?

- Job creation
- Increased tax revenues
- Royalty payments for property owner
- All of the above (correct)
- None of the above

Job creation: 14%
Increased tax revenues: 9%
Royalty payments for property owner: 6%
All of the above: 61%
None of the above: 9%
Question:
Nuclear reactors do not produce air pollution or carbon dioxide while operating.
The technique of hydraulic fracturing to produce natural gas and oil, commonly known as “fracking,” has helped to lower consumer energy prices.
Question:
Electric vehicles use electricity generated only from renewable energy sources.

47% True
53% False (correct)
Question:
Prior to a digging project, underground utility lines should be identified. What number should you call to ensure this is done correctly?
Attitudes
Identify common attitudes and perceptions toward energy

Knowledge
Measure students' understanding of a broad array of energy concepts

Behaviors
Understand common actions and behaviors taken as it relates to energy
Climate change is a vital issue that must be addressed.
Environment Focus

Energy Vocal

Responsibility Driven

National Importance

Comfort and Cost Minded

I believe I have a voice in helping to impact energy policies
Environment Focus
Energy Vocal
Responsibility Driven
National Importance
Comfort and Cost Minded

I have a moral obligation to reduce my energy usage.
Energy efficiency is vital to our national economy.
Environment Focus
Energy Vocal
Responsibility Driven
National Importance
Comfort and Cost Minded

It’s too much of an inconvenience to my lifestyle to reduce my energy usage.
Student responses to the attitudinal questions revealed four distinct personas.

Smart Coaster
Realize they can do something about energy, but don't act.

28%
Student responses to the attitudinal questions revealed four distinct personas.

Agent of Change

- Strongly believe they can do something to conserve energy, and most likely to do so.
- 27%
Student responses to the attitudinal questions revealed four distinct personas.

Diamond in the Rough

Engaged and practical on energy issues, they have a voice but are not well informed.

28 %
Student responses to the attitudinal questions revealed four distinct personas.

**Indifferent Onlooker**

Not well informed or engaged.

18 %
Implications and Action

Smart Coaster

Realize they can do something about energy, but don’t act.

- High knowledge and low engagement suggests the need for:
  - Narrative content that engages empathy or imagination.
  - Elements that build small commitments to energy-related action (organized service projects, short term contests).
  - Opportunities for peer instruction/coaching.
Implications and Action

Agent of Change

Strongly believe they can do something to conserve energy, and most likely to do so.

- Build on this group’s relatively strong knowledge basis.
- Specifically, this group may respond well to:
  - More nuanced policy discussion.
  - Opportunities for advocacy or social action (organized service projects, optional activities).
  - Opportunities for peer instruction/coaching.
Implications and Action

*Diamond in the Rough*

Engaged and practical on energy issues, they have a voice, but are not well informed.

- The central challenge for this group is turning engagement into *informed* engagement.
- This group may benefit from:
  - Seemingly basic instruction that highlights the practicality of energy knowledge.
  - Imagery that reflects ethnic/social diversity.
  - Activity-based learning.
  - Opportunities to build a sense of self-efficacy through highlighting their relatively high performance on energy efficient behaviors.
Implications and Action

Indifferent Onlooker

Not well informed or engaged.

- The indifferent onlooker presents the greatest challenge for content-related programs. This group is lacking in both energy-related knowledge and motivation.
- This group may benefit from:
  - Basic instruction that highlights the practicality of energy knowledge AND has high potential to engage.
  - Imagery that reflects ethnic/social diversity.
  - Elements that build small commitments to energy-related action (organized service projects, short term contests).
### Expected Direction of Energy Trends Ten Years From Now

<table>
<thead>
<tr>
<th>Category</th>
<th>Increase</th>
<th>Flat</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology advancements in energy</td>
<td>79%</td>
<td>15%</td>
<td>7%</td>
</tr>
<tr>
<td>Consumption of renewable energy sources</td>
<td>78%</td>
<td>16%</td>
<td>8%</td>
</tr>
<tr>
<td>Energy demand</td>
<td>76%</td>
<td>17%</td>
<td>7%</td>
</tr>
<tr>
<td>Energy self-sufficiency (e.g. rooftop solar...)</td>
<td>76%</td>
<td>16%</td>
<td>8%</td>
</tr>
<tr>
<td>Consumer energy awareness</td>
<td>63%</td>
<td>28%</td>
<td>7%</td>
</tr>
<tr>
<td>Energy consumption costs</td>
<td>61%</td>
<td>20%</td>
<td>19%</td>
</tr>
<tr>
<td>At-home electricity storage</td>
<td>58%</td>
<td>32%</td>
<td>10%</td>
</tr>
<tr>
<td>Government actions to address climate change</td>
<td>48%</td>
<td>34%</td>
<td>18%</td>
</tr>
<tr>
<td>Production of nuclear energy</td>
<td>44%</td>
<td>32%</td>
<td>24%</td>
</tr>
<tr>
<td>Use of gas as an energy source</td>
<td>34%</td>
<td>31%</td>
<td>35%</td>
</tr>
<tr>
<td>Use of oil as an energy source</td>
<td>26%</td>
<td>30%</td>
<td>44%</td>
</tr>
<tr>
<td>Use of coal as an energy source</td>
<td>21%</td>
<td>21%</td>
<td>59%</td>
</tr>
</tbody>
</table>

Legend:
- **Increase**
- **Flat**
- **Decrease**
Behaviors
Understand common actions and behaviors taken as it relates to energy
Students Who Often or Always…

- Turn off all lights before leaving a room: 81%
- Unplug electronic devices that are not being used: 37%
- Consciously participate in carpooling: 34%
- Encourage friends or family to be more energy efficient: 32%
- Consciously choose to travel without a car (e.g., walk, bike, public transport, etc.): 30%
- Actively search for products that are more energy efficient: 28%
Energy Topics Most Likely to Research Over the Next 6 Months

- Energy efficiency: 42%
- Energy resources: 33%
- Economic impacts of energy actions: 28%
- Role of foreign affairs in energy decisions: 19%
- Other energy actions: 19%
- Other economic impacts: 14%
- Other foreign affairs: 9%
- Other research: 18%
Sources of Information Students Are Likely to Turn to First About Energy

- **Primary Sources**: 66%
  - Search engines
  - Government websites
  - Industry websites
  - Friends or classmates
  - Scholarly research database
- **Secondary Sources**: 36%
  - Textbooks
  - Nonprofit agencies
- **Tertiary Sources**: 33%
  - Scholarly research database
  - Textbooks
  - Nonprofit agencies
- **Last Sources**: 30%
  - Friends or classmates
  - Scholarly research database
  - Textbooks
  - Nonprofit agencies
Level of Trust in Sources as It Pertains to Energy

- High Trust (over 60%)
  - Search engines: 66%
  - Government websites: 36%
  - Industry websites: 33%
  - Friends or classmates: 30%
  - Scholarly research database: 30%

- Average Trust (40-60%)
  - Search engines: 36%
  - Government websites: 33%
  - Industry websites: 30%
  - Friends or classmates: 27%
  - Scholarly research database: 23%

- Low Trust (Below 40%)
  - Search engines: 21%
  - Government websites: 19%
  - Industry websites: 17%
  - Friends or classmates: 17%
  - Scholarly research database: 16%
  - Textbooks: 17%
  - Nonprofit agencies: 11%
What’s Next?
Think!  Fill the Gaps

Talk!  Engage Students

Take Action!  Motivate Behavior Change
Call to Action

The energy story
School to Home
Investment in community
Affect *real* change
Join us for upcoming webinars:

- December – TBD

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