

Energy Merit Badge

Required pre-course work for the 2026 Five Creeks Fall Merit Badge Midway

EVENT Saturday, Nov. 14, 2026	CLASS PM session • 12:30–3:30 p.m.	LOCATION Avon High School
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Purpose. The class meets for only three hours. The items below involve a 14-day home audit, construction, observation outside class, chart preparation, or substantial research. Scouts should arrive with completed records and be ready to explain their own work to the merit badge counselor.

START BY SUNDAY, OCTOBER 25, 2026

Requirement 4 requires a complete 14-day home energy audit and family log. Starting by this date leaves several days to finish the report and organize materials before the Midway.

Must Be Completed Before the Midway

Requirement 1(a) — Energy article

Find an article about the use or conservation of energy. Read it carefully and bring a copy or accessible link plus notes on what interested you, questions it raised, and ideas you did not understand. Be prepared to discuss it during class and revisit it for Requirement 1(b).

Requirement 2(b) — Build an energy-conversion system

Construct a working system that makes at least two energy conversions. Bring the safe, portable system to class when practical, or bring clear photos/video if it cannot be transported. Prepare to identify each energy form and explain every conversion.

Requirement 4 — Fourteen-day home energy audit

Conduct an energy audit of your home and keep a complete 14-day log of what you and your family did to reduce energy use. Complete either the household-energy option or transportation-fuel option in 4(a), and address wiser use, daily activities, reuse, and recycling in 4(b). Bring the audit, daily log, current cost information, and summary.

Requirement 5 — School or community observations

In a notebook, identify and describe five real examples of energy waste in your school or community. For each, suggest a reduction, explain benefits, identify needed changes to routines or convenience, and explain possible resistance. Bring your notebook and be ready to discuss trade-offs.

Requirement 6 — Five energy pie charts

Prepare all five required pie charts using current, credible data. Label each chart, record its source and data year, and write the important idea it reveals. Also prepare to explain how cost affects nonrenewable resource use and when alternatives become practical.

Requirement 7 — Five energy systems

Research five systems from the official Requirement 7 list. For each, explain what is being done to produce more usable energy and address the technology, cost, environmental impacts, and safety concerns. Bring organized notes and source information.

Research Packet to Complete Before Class

Completing this preparation in advance is necessary if the afternoon is to focus on demonstrations, counselor discussion, explanation, and verification. Scouts should use current credible sources, write in their own words, and record titles, organizations, URLs, and data years.

REQ.	TOPIC	WHAT TO BRING
1(a), 1(b)	Energy article	Bring the selected article and initial notes. After completing Requirements 2–8, add notes explaining what the badge work taught you that improved your understanding of the article.
2(a), 3(a)–3(d)	Forms, conversions, and efficiency	Explain how three listed devices use and convert energy. Select one common energy system and identify its affected parts, primary source, useful outcomes, and energy losses.
4(a)–4(b)	Home energy audit	Complete 14-day audit and family conservation log; household-energy or vehicle-fuel data; delivery, measurement, and current costs; wiser-use ideas, reuse, and recycling.
5(a)–5(b)	Community energy waste	Five observed examples; proposed reductions; cost, pollution, or community benefits; routine or convenience trade-offs; reasons people might resist.
6(a)–6(e)	Energy-use data	Five sourced pie charts covering U.S. supply, imported share, sectors, electricity fuels, and world reserves; key meaning of each chart and cost explanation.
7, 8	Energy systems and career	Five energy systems with technology, cost, environmental, and safety notes; several energy-career opportunities; one chosen position with required education and training.

What Each Scout Should Bring

- Completed prerequisite notes, audit log, charts, and reports, printed or saved in an accessible digital format.
- The titles, organizations, links, and data years for sources used in research.
- The energy-conversion system from Requirement 2(b), or clear photos/video when it is unsafe, impractical, or too large to transport.
- A charged device only if requested by the instructor/event coordinator; do not assume reliable Wi-Fi will be available at the Midway.

Note

Energy requires a 14-day home audit and substantial advance work. Scouts who do not complete the listed pre-course work will receive a partial completion and will need to meet with a registered merit badge counselor after the Midway.

Official References

- [Official Energy merit badge requirements](#)
- [U.S. Energy Information Administration data](#)