



The Technical Analysis is the basis for decisions about the likely success of the loan. It should show how much energy and money the proposed energy measure(s) will save, and more importantly, it should include enough information to show how those determinations were reached. It should also provide the information necessary to assess whether the expected payback period is reasonable.

The Technical Analysis should be completed by an engineer or other professional such as a Professional Engineer (PE), a Certified Energy Manager (CEM) or an Accredited Commercial Energy Manager (ACEM). Ideally, it will address all the energy needs of a facility and recommend actions in priority order. In some cases, vendors may prepare the Technical Analysis if only one type of energy measure is under consideration.

### Technical Analyses should include:

1. Name, affiliation, credentials, telephone and email information for person that prepared the analysis.
2. Description of fleet, including use (e.g. patrol, delivery, refuse hauler, etc.) and make, model, number of vehicles, class size, idle time, and location of all vehicles to be retrofitted.
3. Current fuel use including accurate miles/gallon, miles/year, fuel type, and average fuel cost prior to date of application.
4. Description of proposed fleet retrofit(s) including sufficient technical specifications for equipment to enable reviewers to see clearly how equipment will work and how energy savings will be realized.
5. Description of proposed alternative fuel use including accurate miles/gallon, miles/year, fuel type, fuel efficiency (compared to current fuel type), and average fuel cost.
6. Expected annual Btu savings (and/or kWh savings depending on fuel source). List electricity and gas savings separately.
7. Anticipated changes in energy use patterns—such as increased use due to replacement of broken equipment.
8. Expected length of service of proposed new energy-saving measures.
9. Simple payback (cost divided by annual savings).
10. Lifetime savings (annual savings times expected life of energy measure/equipment).
11. This program uses Federal funding; therefore, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.
12. Include all calculations used.

### When calculating cost savings DO NOT consider:

1. Escalating energy costs.
2. Maintenance savings (If maintenance savings are significant, note them in the text, but please do not include in the payback calculation.)

Additional issues may apply in the case of renewable energy projects.

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