



**SECO**  
State Energy  
Conservation Office

# LoanSTAR

for

Public K-12 Schools

Local and County Governments

Public Higher Education Universities

State Agencies

# NOTICE OF LOAN FUND AVAILABILITY

Maximum loan size per application  
\$8 million (\$3 million min for repaid ARRA)

Loan Payback Requirements  
≤10 yrs (≤15 yrs) / ≤EUL

Maximum number of loans  
three per applicant

Interest Rates  
General fund - annual rate of 2 percent  
Repaid ARRA fund - annual rate of 1 percent.

Applications  
Reviewed on a first-come, first-served basis.

Application Submission  
Open enrollment through Aug. 31, 2020 – 2 p.m. CT



# General Guide

## Eligible Borrowers

- Public taxpayer supported entities
- [10 Texas Gov't Code §2305.032](#)
- [34 Tex. Admin. Code §19.41-45](#)

## Loan Qualification Criterion

- Permanently affixed
- Own and Occupy

## Third Party Review

# Loan Recap

306 loans  
\$532 million

\$647 million saved

- K-12 schools
  - 144 (\$138,350,000)
- Local and County Governments
  - 58 (\$149,000,000)
- Hospital Districts
  - 13 (\$7,400,000)
- Higher Education
  - 17 (\$54,900,000)
- State Agencies
  - 74 (\$183,000,000)



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## Funding & Incentives

[SECO Funding Opportunities](#)

[LoanSTAR Revolving Loan Program](#)

[Other Funding Resources](#)



## Programs

[Alternative Fuels Program](#)

[Clean Energy Incubators](#)

[Industrial Energy Efficiency](#)

[Innovative Energy Demonstration Program](#)

[Local Governments Program](#)

[Schools Program](#)

[State Agency and Higher Ed. Program](#)

[Pantex Program](#)

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## Energy Codes

[Training & Code Compliance](#)

[Energy Code Adoption Process](#)

[Code Contacts](#)

[Commercial & Multi-Family Construction](#)

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[State-Funded Buildings](#)

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## Energy Reporting

[State Agencies and Institutions of Higher Ed.](#)

[Local Government](#)

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## Resources

[Combined Heat and Power in Texas](#)

[Energy Efficiency Best Practices Guide](#)

[Energy Savings Performance Contracting](#)

[Remote Energy Audits](#)



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SECO Funding Opportunities  
<https://comptroller.texas.gov/programs/seco/funding/>



# Programs

SECO


## SECO FUNDING OPPORTUNITIES

Throughout the year, SECO announces various funding opportunities to support efficiency programs. Funding opportunities include Notice of Loan Fund Availability for the LoanSTAR program, Request for Applications for energy efficiency grants and Requests for Proposals for qualified firms to contract with SECO on projects.

### Notice of Loan Fund Availability — LoanSTAR Program

*Posted Oct. 18, 2019* — The Texas LoanSTAR (Saving Taxes and Resources) revolving loan program provides low interest rate loans to assist Texas public institutions by financing their energy-related cost-reduction retrofit projects.

**Open enrollment through August 31, 2020**

[Sign up](#)  to receive notifications from SECO when new funding opportunities become available.



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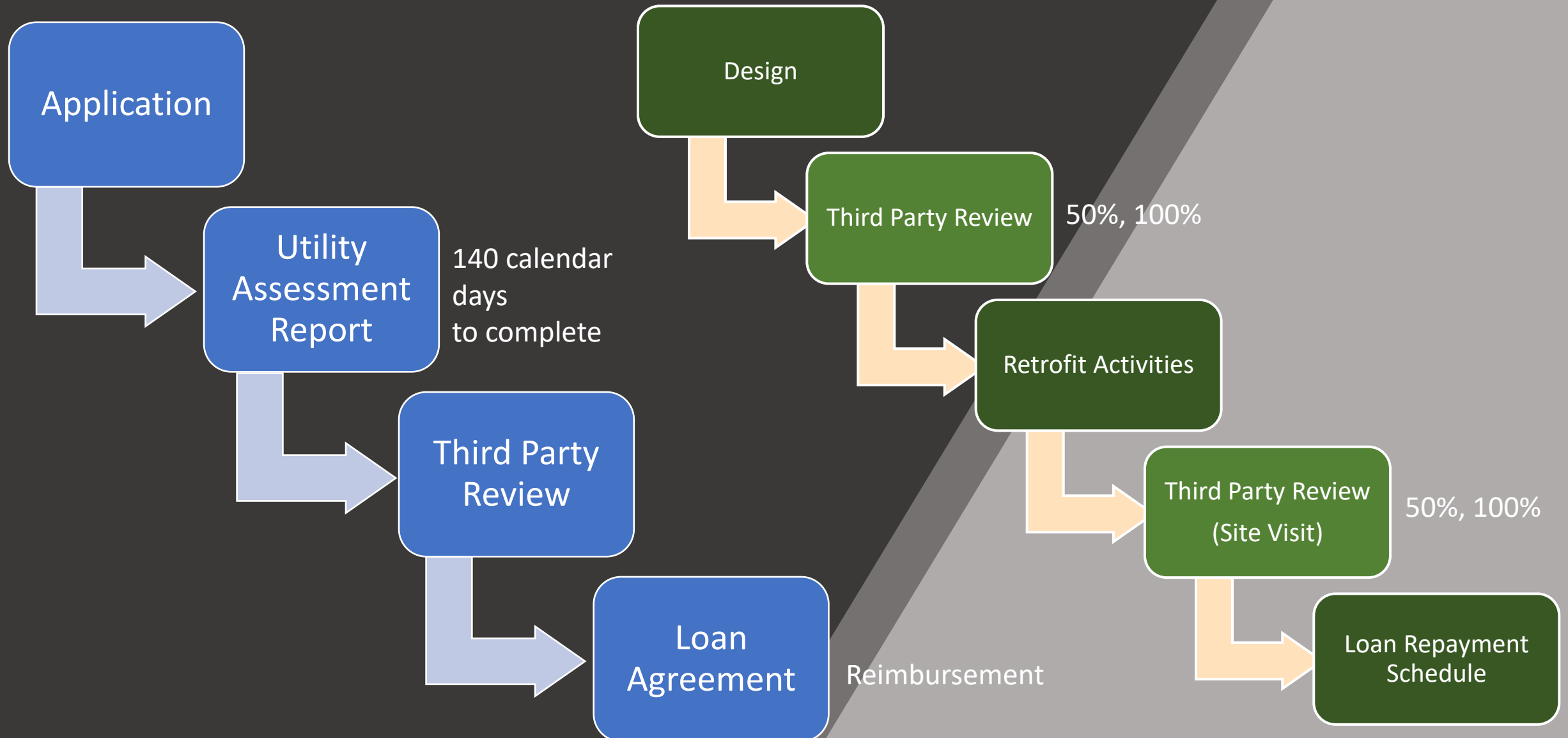
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# Loanstar Process





# Utility Assessment Report (UAR)

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SECO

## **LOANSTAR TECHNICAL GUIDELINES**

The LoanSTAR Program requires that a detailed Energy Assessment Report be prepared according to the following LoanSTAR Technical Guidelines.

### **LoanSTAR Guidebook, Volume I (Word)**

Volume I provides a road map for engineers preparing Energy Assessment Reports for the LoanSTAR Program. It identifies policies to be followed for project calculations and outlines the required format for presenting the projects to SECO for technical evaluation.

### **LoanSTAR Guidebook, Volume II (Word)**

Volume II provides simplified calculation methods for many common energy savings measures. These calculation methods are reduced to look-up and fill-in-the-blank procedures and are provided as an aid for analysts.



# Utility Assessment Report (UAR)

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## TYPES OF PROJECTS FUNDED:

- \* Energy Efficient Lighting
- \* High Efficiency HVAC
- \* Energy & Water Efficiency Management Systems
- \* Energy Recovery Systems
- \* Building Shell Improvements
- \* Load Management Measures
- \* Energy Management Information Systems and Metering
- \* Whole Building & Systems Commissioning
- \* Electric Demand Reduction
- \* Power Factor Correction
- \* Load Shifting (eg, TES)



# Utility Assessment Report (UAR)

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## Frequently Asked Questions

### WHO CAN DEVELOP A UAR?

A Professional Engineer licensed in the State of Texas with knowledge and experience with mechanical, electrical and building envelope systems found in institutional and commercial facilities; knowledge and experience in energy efficiency retrofits; understanding of building and operations procedures; knowledge and experience in conducting energy analyses and preparing comprehensive reports on the findings.

### WHAT CONTRACTING MECHANISMS CAN BE USED?

- Design/Bid/Build
- Design/Build
- Energy Saving Performance Contracts (ESPC)

### CAN WE APPLY FOR A LOANSTAR LOAN ON PROJECTS ALREADY STARTED OR CONSTRUCTED?

No expense paid prior to obtaining final loan agreement signatures for both parties will be reimbursed except the fee paid for completion of the UAR.

**NOTE:** All project expenses are to be included in the itemized cost estimates required by UAR submission.



## REVISED UCRM CATEGORIES:

### 1 – LIGHTING

- 1.1 Lighting Controls
- 1.2 Lighting & Controls

### 2 – HVAC

- 2.1 HVAC Only Renovation/Replacement
- 2.2 HVAC Controls
- 2.3 HVAC & Controls Renovation
- 2.4 HVAC Thermal Storage
- 2.5 HVAC Boiler Plant / Chiller Plant
- 2.6 HVAC Airside
- 2.7 HVAC Water Distribution

### 3 – Commissioning

### 4 – Electrical

- 4.1 – Power Factor Improvement
- 4.2 – Energy/Power Management
- 4.3 – Electrical (Other)

### 5 – Water Conservation

- 5.1 Water Use / Distribution
- 5.2 Water and Sewer Conservation
- 5.3 Domestic Hot Water Renovation/Replacement
- 5.4 Irrigation System Renovation & Controls
- 5.5 Potable Water Efficiency Measures

### 6 – Water and WW Treatment Plant

- 6.1 Water Treatment and Processing
- 6.2 Pumps / Motors

### 7 – Building Loan Reduction

- 7.1 Window Renovation (Replacement/Enclosure)
- 7.2 Envelope Insulation (Roof/Attic/Exterior Walls)

### 8 – Renewable Energy

### 9 – Other UCRM

### 10 – Other UCRM

### 11 – Other Loan Project Costs

### 12 – Engineering Audit Expense

### 13 – Contingency Allowance



# Utility Assessment Report (UAR)

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## RECENT REVISIONS:

### Texas Historical Society (THC)

If the structure is 45 years old or older, listed or eligible for listing in National Register for Historic Places, located in National Register Historic District, or is in a locally designated Historic District, borrower must consult with THC regarding review of 36CFR §800.5 to determine the potential for damage caused by LoanSTAR funded projects.



# RECENT REVISIONS: Life Expectancy of Equipment

**Life Expectancy of Installed Equipment:** ASHRAE Equipment Life Expectancy chart (see [www.ashrae.org](http://www.ashrae.org))

(PARTIAL LISTING)

<u>Equipment</u>	<u>Median Years</u>	<u>Equipment</u>	<u>Median Years</u>
<i>Air conditioners</i>		<i>Boilers, hot water (steam)</i>	
Window unit	10	Steel water-tube	24
Residential single or Split Package	15	Steel fire-tube	25
Commercial through-the wall	15	Cast iron	35
Water-cooled package	15	Electric	15
<i>Heat Pumps</i>		<i>Furnaces</i>	
Residential air-to-air	15	Gas- or oil-fired	18
Commercial air-to-air	15	<i>Reciprocating Compressors</i>	
Commercial water-to-air	19	<i>Packaged Chillers</i>	
<i>Roof-top air conditioners</i>		Reciprocating	20
Single-zone	15	Centrifugal	23
Multi-zone	15	Absorption	23
<i>Controls</i>		<i>Cooling Towers</i>	
Pneumatic	20	Galvanized Metal	20
Electric	16	Wood	20
Electronic	15	Ceramic	34



## RECENT REVISIONS:

Added Current Operating Efficiency Calculation Procedure

Current Operating Efficiency Calculation -

Based on Texas Department of Housing and Community Affairs white paper "*Best Practice – SEER and EER Determination*" in January 2017:

$$\mathbf{EER = (New\ Condition\ EER) * (1 - Maintenance\ Factor)^{age}}$$

with Maintenance Factor typically accepted to be 0.02

# RECENT REVISIONS:

## Maintenance & Operations (Hard Cost) Savings:

- Use a reasonableness test on O&M hard cost savings. Either provide copies of Work Orders (12 to 24 months) illustrating actual maintenance costs for the equipment being replaced, or use industry acceptable maintenance cost estimations such as R.S. Means “Facilities Maintenance & Repair Cost Data” to document estimated savings. If the service has been provided on a contract basis, provide contract cost documentation to document estimated savings.
- O&M hard cost savings should be secondary and not primary. Annual O&M hard cost savings should never exceed the annual energy dollar savings for the measure associated with the O&M costs.
- The duration of operational savings should not exceed the remaining average useful life of the equipment in place.
- Operational savings costs used in the baseline year will remain in place for the duration of the savings. No inflation factors will be included in the costs.
- The Operational Savings will not be reduced by upcoming operational costs associated with the newly installed equipment.





# Volume II Guidelines Updates

**Updated efficiencies to match ASHRAE 90.1 – 2019**

**Added formula to predict the operating efficiency of existing equipment**

**Updated Recommended Light Levels per new IESNA standards.**

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