

How to Apply for Energy Efficiency Fund (E2F)

This is a self-help guideline to guide you through the E2F application process. For enquiries and request of application form, please email NEA_E2F@nea.gov.sg

Step 1: Check if your company is eligible for E2F

- You are a Singapore-registered owner or operator of a manufacturing company sited in Singapore
- Your company is classified under SSIC 10XXX to 32XXX
- Your company's annual group sales turnover does not exceed S\$500 million

Please refer to [Annex A](#) on guidelines to verify SSIC code and annual group sales turnover.

Step 2: Check if your project is eligible for E2F

- Project have not commenced at the time of application (Applicant has not signed contract(s) or issued purchase order(s))
- Project duration is not more than 36 months

Step 2A: Check if your project can qualify for 70% support of qualifying costs

| Pre-approved technologies | Qualifying Criteria | Corresponding Grant Cap per Facility |
|----------------------------------|--|---|
| Lightings | <input type="checkbox"/> Retrofit of non-LED lightings to LED lightings with efficacy of 100 lumens/watt | \$200,000 |
| Air-conditioning | <input type="checkbox"/> Retrofit of air-conditioning with no more than 3 ticks to air-conditioning with 4/5 ticks | \$200,000 |
| Compressed Air System | <input type="checkbox"/> Replacement of compressed air system with air blowers; <i>or</i> <input type="checkbox"/> Replacement of compressed air system complemented with (at least 1 condition must be met): <ul style="list-style-type: none"><input type="checkbox"/> Variable Speed Drive^; <i>or</i><input type="checkbox"/> Air Receivers; <i>or</i><input type="checkbox"/> Zero Purge Desiccant Dryers | \$350,000 |

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| | | |
|---------------|--|-----------|
| | <i>^ Only applicable when there is proof of variable loads/demands and variable loads/demands is more efficient</i> | |
| Boiler System | <ul style="list-style-type: none"><input type="checkbox"/> Replacement of boiler with heat pump; <i>or</i><input type="checkbox"/> Replacement of boiler system complemented with (at least 1 condition must be met):<ul style="list-style-type: none"><input type="checkbox"/> Economizer; <i>or</i><input type="checkbox"/> Condensate heat recovery; <i>or</i><input type="checkbox"/> Combustion trim system on burner that has an electronic gas/air ratio | \$350,000 |

Please refer to Step 2B if your project does not meet the qualifying criteria.

Step 2B: Other energy efficient technologies

- Project involves installation and use of energy efficient equipment or technologies with proven track record of energy savings
- Project results in measurable and verifiable energy savings

Step 3: Prepare application documents

- E2F Application Form*
- ACRA Bizfile
- Latest audited annual financial statements for the past 3 years
- Monthly utility bills for past 12 months
- Quotations for all cost components
- Equipment technical specification

Please email NEA_E2F@nea.gov.sg for the application form. Depending on your project type, you may be required to submit other supporting document.

Step 4: Submit application documents

Please submit the softcopy application documents to NEA_E2F@nea.gov.sg

How to verify SSIC code

SSIC code can be found in the ACRA Bizfile, under “Principal Activities”. To be eligible for E2F, the applicant must have an SSIC code within 10XXX to 32XXX.

Example:

ACCOUNTING AND CORPORATE REGULATORY AUTHORITY (ACRA) **biz FILE**

INFORMATION RESOURCES

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Corporate Compliance and Financial Profile of ABC PTE LTD (200001234A) Date: 28/08/2013
(This is a sample report only)

The Following Are The Brief Particulars of :

| | |
|----------------------|-------------------------|
| Registration No. : | 200001234A |
| Company Name. : | ABC PTE LTD |
| Former Name if any : | |
| Incorporation Date : | 24/04/2000 |
| Company Type : | LIMITED PRIVATE COMPANY |
| Status : | Live Company |
| Status Date : | 24/04/2000 |

| Principal Activities | |
|----------------------|--|
| Activities (I) : | 46304 |
| Description : | WHOLESALE AND RETAIL OF CONFECTIONERY AND BISCUITS |
| Activities (II) : | 10719 |
| Description : | MANUFACTURE OF BAKERY PRODUCTS NEC |

| Capital | | | |
|------------------------------------|------------------|--------------------|------------|
| Issued Share Capital * (AMOUNT) | Number of shares | Currency | Share Type |
| 2000000.00 | 2000000 | SINGAPORE, DOLLARS | ORDINARY |

* Number of Shares includes number of Treasury Shares

| Paid-Up Capital (AMOUNT) | Number of shares | Currency | Share Type |
|-----------------------------|------------------|--------------------|------------|
| 2000000.00 | | SINGAPORE, DOLLARS | ORDINARY |

COMPANY HAS THE FOLLOWING ORDINARY SHARES HELD AS TREASURY SHARES

| Number Of Shares | Currency |
|------------------|----------|
| | |

| | |
|-----------------------------|--|
| Registered Office Address : | 123 ABC STREET #01-01 SINGAPORE (534123) |
| Date of Address : | 01/07/2005 |

SSIC Code of the principal activities:

Activities (I): 46304
Activities (II): 10719

Activity (II) is a manufacturing activity as it is within 10XXX to 32XXX

Company meets the SSIC code criteria

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How to verify annual group sales turnover

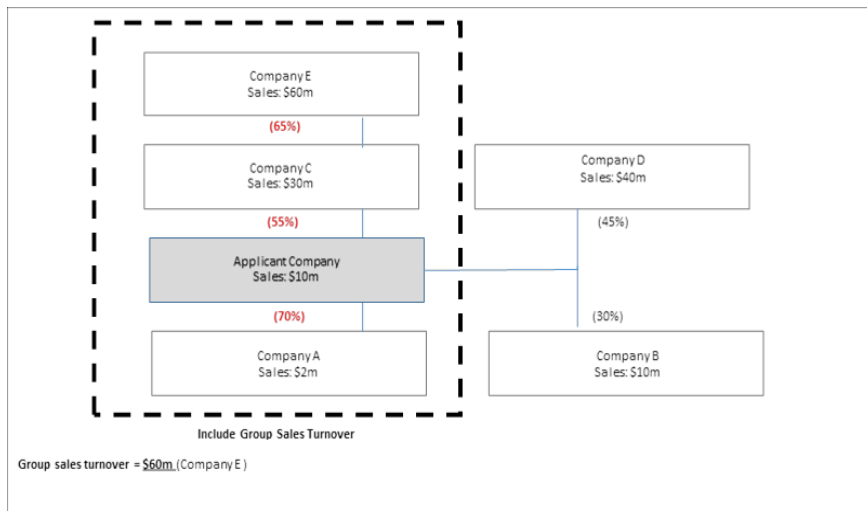
Annual group sales turnover will include:

1. All corporate shareholder(s) holding more than 50% of total shareholding of the applicant company
2. All subsidiary(s) that are more than 50% owned by applicant company

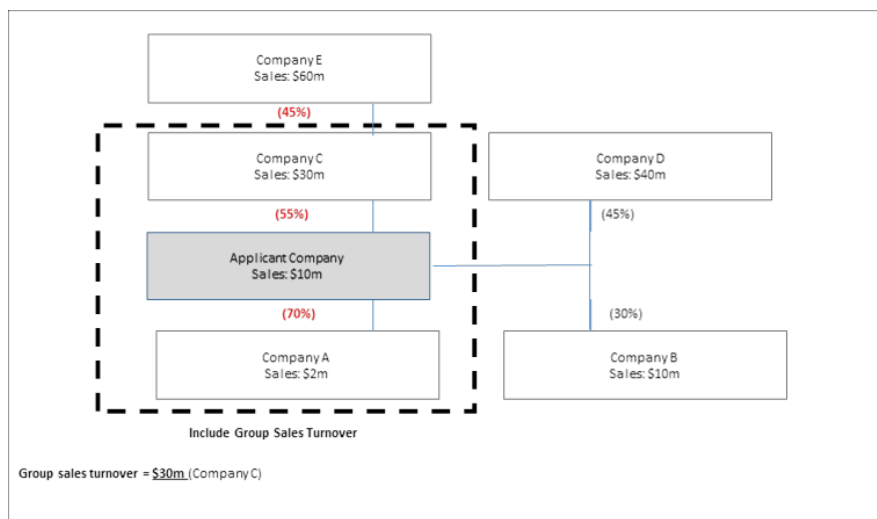
If applicant company has corporate parent(s), the group annual sales turnover of its ultimate corporate parent will be used to determine its eligibility.

If applicant company has subsidiary(s) and no corporate parent(s), applicant company's group annual sales turnover will be used to determine its eligibility

Example A:

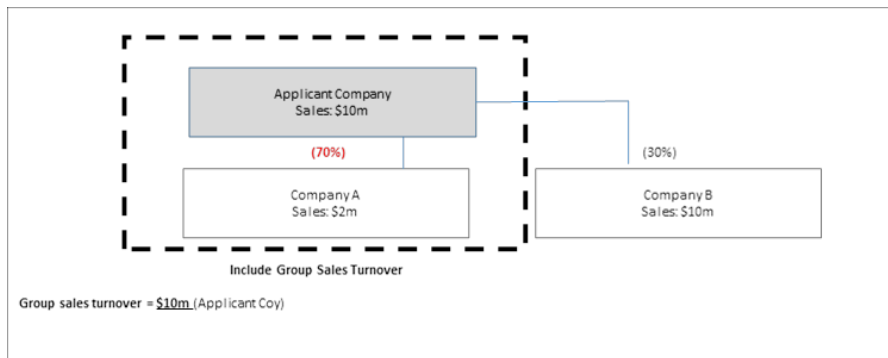


Example B:



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Example C:



Third-party assessment report guidelines

A third-party assessment report will be required for compressed air and boiler system project under pre-approved energy efficient technologies with grant amount exceeding \$50,000.

The third-party assessment report shall be conducted by a third-party qualified endorser which includes:

- (i) Professional Engineer (Mechanical, Electrical or Chemical Engineering),
- (ii) Energy Efficiency Opportunities (EEO) Assessor,
- (iii) Energy Efficiency Technology Centre (EETC)

The third-party qualified endorser may consider justifying energy savings based on the following approaches:

1. Retrofit isolation: Key parameter measurement where savings are determined by field measurement of the key parameter(s)
2. Retrofit isolation: All parameter measurement where savings are determined by continuous field measurement of the energy consumption and/or demand or validated proxy variables and the related independent variables of the energy efficiency measure affected system.
3. Whole facility: Savings are determined by measuring energy consumption and demand at the whole facility or sub-facility level, using energy data from utility meters, whole facility meters, or sub-meters.
4. Calibrated Simulation: Savings are determined through simulation of the energy consumption and demand of the whole facility, or of a sub-facility.
5. Measurement results based on testing and commissioning phase.
6. Design parameters
7. Past energy audit reports

Measurement & Verification (M&V) Guidelines

1. Introduction

- 1.1 Companies can ascertain the performance improvement and energy savings achieved from the implementation of energy efficiency projects through proper M&V done in accordance to guidelines and codes¹.
- 1.2 For the purpose of E2F, companies will be required to submit the following:
 - M&V Plan prior to project approval; and
 - M&V Report after project completion.

2. M&V Plan

- 2.1 A M&V Plan states the method to measure, verify and compute energy savings. It also contains the pre-implementation or baseline measured results.
- 2.2 A M&V Plan should include the following:
 - Schematics of existing and proposed systems showing the locations of measurements
 - Parameters to be measured
 - Details of measuring instrumentation (e.g. type, uncertainty, calibration certificates²)
 - Measurement period and data logging interval
 - Annual energy savings computation methodology
 - Baseline measurement results (e.g. existing system performance and energy consumption) with charts (if applicable)
- 2.3 Companies may consult NEA on the method to measure, verify and compute energy savings before embarking on the baseline measurements.
- 2.4 The M&V Plan must be endorsed by a third-party qualified personnel (refer to para 4 of this document for details).
- 2.5 NEA's approval shall be sought before the existing equipment are removed.

3. M&V Report

- 3.1 A M&V Report states the post-implementation measurement results and energy savings achieved after project completion.
- 3.2 A M&V Report should include the following:
 - Schematics of proposed system showing the locations of measurements
 - Parameters measured

¹ Examples include the International Performance Measurement & Verification Protocol and SS 591: 2013 Code of Practice for Long Term Measurement of Central Chilled Water System Energy Efficiency.

² Instrumentation should be calibrated within the past one year from date of measurement.

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- Details of measuring instrumentation (e.g. type, uncertainty, calibration certificates)
- Measurement period and data logging interval
- Post-implementation measurement results (e.g. actual system performance and energy consumption, explanations for any deviation from estimated outcomes) with charts (if applicable)
- Annual energy savings computation

3.3 The M&V Report must be endorsed by a third-party qualified personnel (refer to para 4 of this document for details).

4. Endorsement

4.1 Companies shall inform NEA before any baseline and post-implementation measurements are carried out.

4.2 All measurements shall be witnessed by NEA and a third party qualified personnel. The list of third party qualified personnel is shown in the table below.

| Equipment / System | Third Party Qualified Personnel |
|-------------------------------|---|
| Chilled water system | <ul style="list-style-type: none">• Professional Engineer (PE) who is registered with the Professional Engineers Board of Singapore under the field of Mechanical, Electrical or Chemical Engineering• Energy Efficiency Opportunities Assessor (EEO Assessor)• Singapore Certified Energy Manager (SCEM) |
| Compressed air system | |
| Boiler system | |
| All other equipment / systems | <ul style="list-style-type: none">• PE (Mech/Elect/Chem)• EEO Assessor |

4.3 The measurement data shall be secured by the independent qualified personnel, who shall also report to NEA on how the data was secured.

4.4 The M&V Plan and M&V Report shall be endorsed by the same third-party qualified personnel who had witnessed the baseline and post-implementation measurements.