



WEBINT Series On Cost Accounting Standards

**Presentation on
CAS 8: Cost of Utilities
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Utilities

- Production processes need several inputs other than raw material in the form of water, steam, electricity, and the like. These inputs are known as **utilities**.
- An input can be **utility or production input**.

For example in case of manufacture of Caustic Soda, electricity is a principal input for electrolysis of brine. If there are multiple connections / source of supply of electricity and in production of Caustic soda one of the source is directly connected, **it is to be treated as production input** and not as utility. For other connection where utility power is distributed to one or more end users, **it is to be treated as utility**.

- When different activities are required to be carried out on given input(s) **to make it distributable and usable by one or more consuming sections**, it should be recognized as a distinct utility. A given utility may have more than one distinct utilities.

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For example supplier of electricity may be providing electricity at 11 KVA and thereafter it is converted to 460 V and given to different users. One of such user may employ step down process and bring the voltage level to 230V. Depending upon the relevancy, the **electricity in this case may be treated as two distinct utilities** i.e. **460 V (High Voltage)** and **230 V (Low voltage)** electricity, If there is variation in supply rate.

Utilities

- Sometimes an entity may have **centralized utility or utility at department level**.

For example a manufacturing process may need some form of compressed air, whether for running a simple air tool or for more complicated tasks such as the operation of pneumatic control. Compressed Air Utility may be centralized services or individual air compression units are provided for each department depending upon the requirement. In case individual air compression units are provided it may be possible **to merge the cost of operating the air compressor** with the respective departmental expenses. But where centralized air compression and supply is made, **a separate air compressed utility is to be accounted**.

- CAS-8 is **applicable to the entities producing utilities for use in its manufacturing process**. It is not applicable to the entities primarily engaged in generation and sale of utilities.
- Issues related to **ascertainment and treatment of carbon credit, are not covered** under this CAS-8.

Utilities

Classification of Utility

Various types of utilities are used in manufacturing process. These are **classified according to the nature of utility**, such as power, steam water, compressed air and the like.

- **Power** – Purchased Power, Generated Power (Stand alone), Co-generation.
- **Water** – Raw Water, Treated Water, Demineralized Water, Distilled Water/ Softening Water, Chilled/ Hot water/ Cold Water.
- **Steam** – Low Pressure Steam, High pressure Steam.
- **Climatic Control** – Air conditioning, Humidification, Air Handling units.
- **Air-** Compressed Air Instrument Air (Vacuum), Oxygen Gas, Nitrogen gas, Hydrogenation.

Utilities

Unit of Measurement of Utility

Each utility has a **different measurement unit considering its nature** and cost is expressed in per unit of the related utility.

- **Power** – **KWH** (Kilowatt Hour) or **MWH** (Megawatt Hour).
- **Water** – **Liters /Kilo Liters**.
- **Steam** – **KG/CM²** (Kilogram / Square Centimeter) **at -- Degree Celsius**.
- **Heating** – **K Cal** (Kilo Calorie) or **Btu** (British thermal unit).
- **Air**- **M³** (Cubic Meter)

CAS – 8 Cost of Utilities

Introduction

*This standard deals with the **principles and methods of classification, measurement and assignment of cost of utilities**, for determination of the cost of product or service, and the presentation and disclosure in cost statements.*

Objective

*The objective of this standard is to **bring uniformity and consistency in the principles and methods** of determining the cost of utilities with reasonable accuracy.*

CAS – 8 Cost of Utilities

Scope

- *This standard shall be applied to **cost statements which require classification, measurement, assignment, presentation and disclosure** of cost of utilities including those requiring attestation.*
- *For determining the cost of production to arrive at an assessable value of **excisable utilities used for captive consumption, Cost Accounting Standard 4 on Cost of Production for Captive Consumption (CAS 4)** shall apply.*
- *This standard shall **not be applicable to the organizations primarily engaged** in generation and sale of utilities.*
- *This standard **does not cover issues related to the ascertainment and treatment of carbon credits**, which shall be dealt with in a separate standard.*

CAS – 8 Cost of Utilities

Relevant Definitions

- **Utilities:** *Significant inputs such as power, steam, water, compressed air and the like which are used for manufacturing process but do not form part of the final product.*
- **Stand-by utilities:** *Any utility created as backup against any failure of the main source of utilities.*
- **Committed Cost:** *The cost of maintaining stand-by utilities shall be the committed cost.*

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Principles of Measurement

- *Each type of utility shall be treated as **a distinct cost object**.*

For example power, steam, water, compressed air, oxygen, nitrogen, coke oven gas and the like are distinct utilities, and the cost is collected and measured for each utility separately.

- *Cost of utilities purchased shall be **measured at cost of purchase including duties and taxes, transportation cost, insurance and other expenditure directly attributable to procurement (net of trade discounts, rebates, taxes and duties refundable or to be credited) that can be quantified with reasonable accuracy at the time of acquisition.***

There can be a mix source of supply for a given utility e.g. entity may purchase electricity from electricity supplier and may be receiving from its own stand-by facility for generation of electricity. Cost of utility consists of direct employee cost, fuel, direct expenses, chemicals, stores & spares, repairs & maintenance, depreciation & inter utility transfer cost.

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Principles of Measurement

- ***Cost of self generated utilities for own consumption shall comprise direct material cost, direct employee cost, direct expenses and factory overheads.***

Cost of power generation will include cost of fuel such as furnace oil, coal, salaries and wages, consumable stores, repair and maintenance, depreciation and factory overhead. Unit cost is arrived at on the basis of the net aggregate consumption in different departments after adjusting transmission losses.

In case of cogeneration (power and steam) where waste heat from TG (Turbine Generation) is recovered in waste heat recovery unit and used for production of steam, due credit should be given to the Power plant and corresponding charge to SGP(Steam Generation Plant).

Charging of power to the consuming cost object is generally done at the weighted average of the cost of power purchased, generated and distribution cost at the consuming point.

CAS – 8 Cost of Utilities

Principles of Measurement

- *In case of **Utilities generated for the purpose of inter unit transfers**, the distribution cost incurred for such transfers shall be added to the cost of utilities determined as per the previous paragraph.*

The cost of such utilities will comprise cost of generating utility and **cost of distribution of facility**. Distribution may be through a pipe line/ transmission line. The cost of maintenance of pipe line/ Transmission line for transfer of utility will be added to the cost of utility.

- ***Cost of Utilities generated for the inter company transfers shall comprise direct material cost, direct employee cost, direct expenses, factory overheads, distribution cost and share of administrative overheads.***

Cost of utility so transferred will comprise cost of generating utility, cost of distribution facility and **share of administrative overhead**. Transmission loss should be treated as per agreement between the parties.

CAS – 8 Cost of Utilities

Principles of Measurement

- *Cost of **Utilities generated for the sale to outside parties** shall comprise direct material cost, direct employee cost, direct expenses, factory overheads, distribution cost, share of administrative overheads and marketing overheads.*

The sale price of utilities sold to outside parties will include cost of generating utility, cost of distribution facility, share of administrative overhead **plus marketing overhead and margin**

- *Finance costs incurred in connection with the utilities **shall not form part** of cost of utilities.*
- *The cost of utilities shall include the cost of distribution of such utilities.*

The cost of distribution will consist of the cost of delivery of utilities up to the point of consumption.

CAS – 8 Cost of Utilities

Principles of Measurement

- *Cost of utilities **shall not** include imputed costs.*
- *Where cost of utilities is accounted at standard cost, the price variances related to utilities shall be treated as part of cost of utilities and the portion of usage variances due to normal reasons shall be treated as part of cost of utilities. Usage variances due to abnormal reasons shall be treated as part of abnormal cost.*
- *Any Subsidy/Grant/Incentive or any such payment received/receivable with respect to any cost of utilities shall be reduced for ascertainment of the cost to which such amounts are related.*

Subsidy, grant or incentives are provided for specific purpose e.g. generation of non-conventional energy. Any subsidy, grant received/receivable should be reduced from the utility cost.

CAS – 8 Cost of Utilities

Principles of Measurement

- *The cost of production and distribution of utilities shall be determined based on the normal capacity or actual capacity utilization whichever is higher and unabsorbed cost, if any, shall be treated as abnormal cost. Cost of a Stand-by Utility shall include the committed costs of maintaining such a utility.*

Where utilities are created **exclusively for captive consumption**, utility plants are operated based on the production plan of end product. Normal capacity of end product is considered to be normal capacity for the utility.

When end product is **operated at below normal capacity** in adverse market conditions or recession, the **normal capacity adopted for end product should be treated as normal capacity for the utility**. The unabsorbed cost is to be treated as abnormal cost.

Committed cost of maintaining a stand-by utility **should be included in the cost of stand-by utility** e.g. in case of electricity, there is one subset called purchased electricity and another is electricity generation through DG set.

CAS – 8 Cost of Utilities

Principles of Measurement

- Any ***abnormal cost*** where it is material and quantifiable ***shall not form part of the cost of utilities.***

Abnormal cost may arise due to plant break down, flood fire, due to low capacity utilization etc. **Such cost will not form part of the utility cost.**

- ***Penalties, damages paid to statutory authorities or other third parties shall not form part of the cost of utilities.***

Penalties /damages are levied for non compliance of regulatory requirements e.g. not complying with boiler inspection, not safeguarding hazardous utility. **Penalty so levied shall not form part of cost of utilities.**

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Principles of Measurement

- ***Credits/recoveries*** relating to the utilities including cost of utilities provided to outside parties, material and quantifiable, ***shall be deducted from*** the total cost of utility to arrive at the net cost of utility.

For example:

(1) Where a unit has a township/colony, electricity and water charges recovered for its use may be credited to the cost of these utilities and net cost distributed to production centers.

(2) If utility is sold by Unit A to outside parties, credit is to be given to the cost of utility at price of utility sold to outside parties (i.e. cost of utility including distribution +administrative Overhead+ Marketing Overhead and Margin)

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Principles of Measurement

- ***Any change in the cost accounting principles applied for the measurement of the cost of utilities shall be made only if, it is required by law or for compliance with the requirements of a cost accounting standard, or a change would result in a more appropriate preparation or presentation of cost statements of an organisation.***

For example: If various inputs are valued on FIFO basis, it should be followed consistently.

CAS – 8 Cost of Utilities

Assignment of Cost

- *While assigning cost of utilities, **traceability to a cost object in an economically feasible manner** shall be the guiding principle.*
- *Where the cost of utilities is not directly traceable to cost object, it shall be **assigned on the most appropriate basis**.*
- *The most appropriate basis of distribution of cost of a utility to the departments consuming services is to be **derived from usage parameters**.*

The **meter installed for recording consumption of utility** is the right source of traceability of cost of utility for a cost object. If no meters are provided, the cost of utilities is to be assigned on the **basis of as stated in the project report, technical estimates taking into account the equipment rating capacity, space, volume** etc.

Economic feasible means **cost effectiveness** in the sense that cost accounting is not too expensive in relation to expected benefits.

CAS – 8 Cost of Utilities

Presentation

- ***Utilities costs shall be presented as a separate cost head for each type of utility in the cost statement, if material.***

Materiality is to be judged in terms of nature, quantity and cost of utility. A piece of information is material, if its omission/non-disclosure could influence the decision of the user. If a utility is not material, it may be shown under production overheads.

- ***Where separate cost statements are prepared for utilities, cost of utilities shall be classified as purchased or generated. Such statement shall also include cost of utilities consumed along with quantitative information by individual consuming units, inter unit transfers, inter company transfers and sale to outside parties wherever applicable.***

If a utility is purchased and generated, purchase value of the units purchased and cost of units generated is to be indicated in the cost statement separately.

CAS – 8 Cost of Utilities

Disclosure

The cost statements shall disclose the following:

- ***The basis of distribution of Cost of Utility to consuming centers.***

The basis of distribution of cost of utility to the consuming center adopted is to be disclosed in the cost statement. Normally it will be based on meter readings of period/technical estimates etc.

- ***The cost of purchase, production, distribution, marketing and price with reference to sales to outside parties.***

For example: During the period, unit has sold 5680 KWH units to outside parties @ Rs 6.50 per KWH against cost of sales (including marketing and distribution cost) of Rs 5.10 per KWH.

- ***Where cost of utilities is disclosed at standard cost, the price and usage variances.***

Cost statement of a utility should disclose price and usage variance separately relating to various inputs.

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Disclosure

- ***The cost and price of Utility received from/supplied to related parties.***

If any utility is procured from or supplied to related parties, its relationship, nature of transaction (quantity, rate, other terms/ conditions of procurement) are to be disclosed.

- ***The cost and price of Utility received from/supplied as inter unit transfers and inter company transfers.***

Inter unit transfers/inter company transfers relating to utility received/supplied is to be disclosed in the cost statement as a foot note. It should indicate cost of a utility supplied and price of a utility purchased.

- ***Cost of utilities incurred in foreign exchange.***
- ***Any Subsidy/Grant/Incentive and any such payment reduced from Cost of utilities.***

CAS – 8 Cost of Utilities

Disclosure

- *Credits/recoveries relating to the Cost of utilities.*
- *Any abnormal cost excluded from Cost of utilities.*
- *Penalties and damages paid etc. excluded from cost of utilities.*
- *Any change in the cost accounting principles and methods applied for the measurement and assignment of the Cost of utilities during the period covered by the cost statement which has a material effect on the Cost of utilities. Where the effect of such change is not ascertainable wholly or partly the fact shall be indicated.*
- *Disclosures shall be made only where material, significant and quantifiable.*
- *Disclosures shall be made in the body of the Cost Statement or as a foot note or as a separate schedule.*

Thank You !!