

Article # 21

By A. Kaupp

Statistical Energy Consumption Data of Indian Firms: Would Shareholders Agree?

We all talk about how important energy cost reduction is for Indian industry, particularly for designated consumers under the Energy Conservation Act. The later are supposed to be the most energy intensive industries and entities in India. Before BEE was created by the Energy Conservation Act 2001, many large firms, particularly those who were audited by law and had to submit their financial results, reported on a quarterly basis financial details. At what percentage of energy cost, as a fraction of other costs or income, firms are willing to look into energy cost reduction is a matter of management style, and not always a matter of having high fractional energy costs. A few years ago, I was asking the TITAN firm why they engage in energy conservation measures as a watch and jewellery maker, when only 0.5% of the manufacturing costs are energy costs. The answer was typical for a firm with a good management, "We also spent Rs. 1 Lakh a year on keeping the grass short on the lawn. Why not optimization of energy costs". On the other hand some firms having fractional energy costs of 30% or more do not care much about energy cost reduction.

From a marketing point of view, the issue of how to sell energy efficiency to a firm should be based on the principle "X percent of energy cost reduction implies Y percent increase in profit". But this leads to the question of how do you define the "fractional energy costs," and how should BEE report and classify firms with respect to fractional energy costs?

In my opinion there is this good old fashioned approach that manufacturing a product means to operate equipment in a factory hall and provide (i) raw materials, (ii) staff, (iii) power, fuel and water. These are the primary "manufacturing costs". Some equipment gets worn out, so it is therefore also fair to include (iv) depreciation of equipment and (v) interest paid. There is neither a right nor a wrong way to express fractional energy costs.

It all depends which accounting base is favored.

Let us take as an example an audited financial statement in Lacs of Rs. of a firm manufacturing surface coating material:

Consumption of raw material	7,806
Power & Fuel	1,591
Staff cost	836
Other Expenditures	(3,155 not included)
Interest	902
Depreciation	922
<hr/>	
Sum	12,057
Profit before tax	3,850, furthermore

In this case $1,591/12,057 = 13.2\%$ is the fractional energy cost of "manufacturing" as per my definition excluding other expenditures. Alternatively, using net sales, or income from operation of Rs. 18,625 Lacs as a base, the fractional energy costs would only be 8.5%. However, in terms of marketing energy efficiency it would be best to express energy costs as fraction or multiplier of "profit before tax". In this case $1,591/3,850 = 41.6\%$ is the fractional energy cost based on profit before tax.

My reason for this approach is simple. I view the Energy Conservation Act 2001 as a law to force industry to make more profit. Consequently marketing energy conservation should be based on the principle "X percent of energy cost reduction implies Y percent increase in profit". In this case a 5% of decrease in energy cost (for the same level of product output) would result in a 2% increase in profit. It does not look big but would enlighten shareholders! Taking an example of a firm that does not make much profit, but has high energy costs expressed as percentage of profit, an astonishing large percentage increase in profit is generated by modest efforts in energy efficiency. In other words, the marketing line is "Increase profits through energy conservation".

However you may run into a management telling; “Why energy conservation, we make enough profit”. It is of course the prerogative of any management to be satisfied with their profit. Whether shareholders approve of it is a different story. Having a certified and designated energy manager participating in shareholder meetings would certainly help the cause.

Assume the same firm makes only Rs. 250 Lacs profit. Consequently 5% energy cost reduction of 1,591 is equivalent to Rs. 79.55 Lacs energy cost savings. This increases profit before tax by 32%.

I do have one query and three hypothesis which visitors to the website may answer or dispute.

Query: What would be the best way to report financial data for the firm in an energy audit report, taking into consideration standard reporting formats already in use where power and fuel consumption is occasionally mentioned?

Hypothesis 1: In times when profits erode, firms look at their bottom line and the demand for energy cost reduction advice goes up.

Hypothesis 2: In times when profits erode, firms have no money to invest in energy cost cutting measures and therefore demand for energy cost reduction advice goes down.

Hypothesis 3: Firms that make lots of profit are not too interested in advice on energy cost reduction.

I personally believe in Hypothesis # 1 and # 3.