

**NATIONAL PRODUCTIVITY & INNOVATION
AWARD SCHEME GUIDELINES
(2015-2016)**

Electronics and Computer Hardware Sector

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NATIONAL PRODUCTIVITY COUNCIL

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**NATIONAL PRODUCTIVITY & INNOVATION AWARD (NPIA)
(2015-2016)**

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PRODUCTIVITY & INNOVATION

Productivity is a measure of the efficiency of a person, machine, factory, system, etc., in converting inputs into useful outputs. Productivity is computed by dividing average output per period by the total costs incurred or resources (capital, energy, material, personnel) consumed in that period. Productivity is a critical determinant of cost efficiency. The commonly accepted general definition of Productivity is the ratio of output over input.

Productivity is an average measure of the efficiency of production. It can be expressed as the ratio of output to inputs used in the production process, i.e. output per unit of input. When all outputs and inputs are included in the productivity measure it is called total productivity. Outputs and inputs are defined in the total productivity measure as their economic values. The value of outputs minus the value of inputs is a measure of the income generated in a production process. It is a measure of total efficiency of a production process and as such the objective to be maximized in production process.

Whereas, Innovation is the multi-stage process whereby organizations transform ideas into improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace. It emphasis on transformation of ideas into improvements that allow the companies to compete in the market place.

NATIONAL PRODUCTIVITY & INNOVATION AWARD (NPIA) SCHEME

1. The objectives of the National Productivity & Innovation Award (NPIA) scheme is to identify and bring forward innovative enterprises in six MSME (Micro, Small & Medium Enterprises) sectors viz Electronics & Computer Hardware, Leather Products, Light Electrical, Sports Goods, Textiles & Garments, & Toy Industry who through their innovative actions have introduced breakthrough changes in products, services, processes, and new methods of production for augmenting enterprise level productivity and competitiveness in the financial year 2015-2016, and can become role models for others to emulate.
2. The above sectors have been selected on the basis of fact that the above sector is providing domestic value addition and substantial employment generation opportunities

with low level of investments. This sector has also been identified for furthering its growth in the National Strategy for Manufacturing for the 12th Five Year Plan drafted by National Manufacturing Competitiveness Council. The institution of the award scheme for this sector would mainly be focusing on stimulating the innovative capabilities of this sector for recognizing the productivity improvement initiatives and contribution besides innovation efforts undertaken by it. It is worthwhile to mention here that the awards would enable industry players to learn from the best practices of one another. Besides, would encourage firms in selected segment of industry for productivity augmentation and achieving benchmarks with the help of innovations in the areas of product development, efficiency improvement, and profitability of the industry.

3. National Productivity Council has successfully implemented National Productivity Award scheme in various subsectors of Agriculture, Industry and Service Sector for almost one and half decade. Based on the experience gained during the implementation of the aforesaid scheme and the need to include assessment of creative innovations undertaken by the industry for enhancing its competitiveness, NPC has now evolved a new scheme called National Productivity & Innovation Award (NPIA) Scheme.
4. After successful completion of the NPIA (2013-14) & NPIA (2014-15), the suggestions for improvement were sought from the Manufacturing Units, Experts and Associations. The Expert-cum-Jury (ECJ) has evaluated the suggestions and approved the Application Proforma for NPIA (2015-16).

ELIGIBILITY FOR PARTICIPATION

1. The organization should be a registered Manufacturing Unit and it should have at least one registration number from the following:
 - a. Micro, Small & Medium Enterprises (MSME) Registration Number
 - b. National Small Industries Corporation (NSIC) Registration Number
 - c. Value Added Tax/ Taxpayer Identification Number (VAT/TIN) Registration Number
 - d. Udyog Aadhar
 - e. Industrial Entrepreneurship Memorandum (IEM) Number

2. The Manufacturing Unit can apply to any one of the following category of the NPIA (2015-16), as defined under:
 - Micro Category – The Manufacturing Unit with Gross Investment in Plant & Machinery not exceeding Rs 25 Lakh under this category will be considered as Micro Enterprise.
 - Small Category – The Manufacturing Unit with Gross Investment in Plant & Machinery between Rs 25 Lakh – Rs 5 Crores under this category will be considered as Small Enterprise.
 - Medium Category – The Manufacturing Unit with Gross Investment in Plant & Machinery between Rs 5 Crores – Rs 10 Crores under this category will be considered as Medium Enterprise.
3. The declared gross value of plant and machinery without depreciation will be considered to ascertain the category of the company as per Balance Sheet/Industrial Entrepreneurship Memorandum.
4. The Jury Members/Officials and their direct relatives are not eligible to participate in the said scheme and their candidature will be summarily rejected.
5. The unit manufacturing the products of the following types of Electronics and Computer Hardware sector is eligible to participate in NPIA (2015-16) scheme:
 - a. Consumer Electronics
 - b. Control, Instrumentation Industrial Electronics (Medical/Automobiles)
 - c. ICT Hardware
 - d. Telecommunication and Broadcasting Equipment
 - e. Electronic Components
 - f. Security & Surveillance Equipments

6. Under NPIA (2015-16) Scheme, the participating Manufacturing Unit has to provide any one of the following:
- a. The copy of registration with Ministry of Micro, Small, Medium Enterprises (MSME)
 - b. The copy of registration with National Small Industries Corporation (NSIC).
 - c. Value Added Tax (VAT)/Taxpayer Identification Number (TIN) Registration Certificate.
 - d. Udyog Adhaar
 - e. Industrial Entrepreneurship Memorandum
- AND
- i) Income Tax Return (ITR) statements of the Manufacturing Unit for the period i.e. from 2013-2014 to 2015-16 (03 years). (*Mandatory*)
 - ii) Audited Account Statements (i.e. Balance Sheets, Profit & Loss Account along with all annexure with Gross Block Schedule of Plant & Machinery) for the years ending March 2014, March 2015, March 2016 (03 years). (*Mandatory*)

Note:

1. Only, mechanized & semi-mechanize Manufacturing Unit is eligible to apply in the NPIA (2015-16) scheme.
2. Initially, the Manufacturing Unit will be evaluated based on the self-declared values as per the '**Application Proforma**'. Subsequently, it has to submit the requisite supporting documents to corroborate the facts, as & when requested by NPC. If at any stage, it is found that Manufacturing Unit is neither satisfying the eligibility criteria nor providing the required supporting documents, its participation will be cancelled/rejected without giving any reason thereof & the decision of NPC will be final in this regard.
3. A Manufacturing Unit has to strictly submit only one application. Multiple applications with difference in data/information as well as incomplete applications will be summarily rejected.
4. Only Manufacturing Unit in India is eligible to apply.

METHODOLOGY

1. An Expert-cum-Jury (ECJ) has been constituted jointly by drawing experts from academia, research, consultancy and concerned department/ministry officials involved in promotion, policy formulation, R&D, Innovation and Technical back stopping along with NPC representative as Member Secretary/Coordinator. The Expert Committee has finalized the scheme determining the (a) eligibility for participation (b) quantitative and qualitative factors to be considered (c) weightage to be given to each of the quantitative and qualitative factors (d) questionnaire for obtaining required information from the participating industrial unit.
2. The performance of each of the participating industrial unit for the reference year (the latest year 2015-2016) called ‘Current Value’ will be adjudged in relation to the average performance for the last two years called ‘Average Base Value’.
3. The ECJ has approved the ratio of 70:30 between Quantitative & Qualitative Factors and the weightage ratio of 60:40 between Growth and Level of performance under Quantitative Factors (Annexure ‘X’). The final approved list of quantitative & qualitative factors or parameters selected are attached at (Annexure ‘Y’)
4. The formula used for normalization is given below:

$$\text{NORMALISED VALUE} = \frac{\text{ACTUAL VALUE} - \text{MINIMUM VALUE}}{\text{MAXIMUM VALUE} - \text{MINIMUM VALUE}}$$

$$\text{SCORE FOR A FACTOR} = \text{NORMALISED VALUE} \times \text{WEIGHTAGE}$$

5. On receipt, the applications will be evaluated on self-declared values for Quantitative & Qualitative Factors.
6. The broad indicative evaluation criteria envisaged for scheme is independent of the segment (sub-sector). The evaluation process will include assessment of both Quantitative and Qualitative factors.

7. After ascertaining the eligibility, the unit will be requested to submit the supporting documents for verification and finalization. If needed, the unit will also facilitate the visit of NPC officials to ascertain the fact/data provided.
8. Each industrial unit has to be graded in a method which would show their position vis-à-vis other industrial units. The industrial units would be graded on a scale between 0.0 to 1.0 i.e the best performing unit gets a grade of 1.0 and the least performing industrial unit gets a grade of 0.0 while the rest of the industrial units get a grade between the two limits.
9. The Jury will decide the three best industrial units eligible for receiving the National Productivity and Innovation Awards. The decision of the jury will be final in all respects. The jury has the right not to give any award to any of the participating industrial unit in case it considers that the participation in the contest is not satisfactory. The Jury will also have the right to visit participating industrial unit or invite them to Delhi for verification of data, if it so desires.
10. The Jury will have the power to review the scheme as and when required. National Productivity Council will provide the Secretariat for operating the Scheme.

AWARDS CATEGORY

The Prize under NPIA 2015-16 will be given in three main categories Micro, Small and Medium. In each category, there would be awards at three levels/Ranks i.e. first, Second & Third. Every winning unit will receive a certificate along with an Award Trophy/Plaque. The discretion to decide the Award Trophy/Plaque & Certificate for each rank in each category under each sector is sole discretion of NPC.

HOW TO APPLY

The Manufacturing Unit can submit its application in the prescribed ‘Application Proforma’ by post, email or online. The ‘**Application Proforma**’ (in four PARTS – A, B, C, D) is available on NPC Website www.npcindia.gov.in.

Instruction to apply offline/ through Manual Form:

1. The Applicant Manufacturing Unit may download the Application Proforma from our website www.npcindia.gov.in.
2. The Applicant has to ensure that completely filled in ‘Application Proforma’ is received by NPC before the last date of submission.
3. The cover of the envelop should be marked as ‘National Productivity & Innovation Award (2015-16) scheme for Electronics and Computer Hardware Sector’ and ‘Confidential’ and sent to:

Dy. Director (PA),
NATIONAL PRODUCTIVITY COUNCIL,
Utpadakta Bhavan, 5-6, Institutional Area,
Lodi Road, New Delhi-110003.

OR

Instruction to apply Online:

1. The Applicant Manufacturing Unit may register through ‘Registration’ tab by providing required information.
2. Subsequently, the password will be sent to the registered Email ID/Mobile Number of the Manufacturing Unit. The user name of login will be the above registered email ID.
3. The applicant can login to complete & submit its application.

Note: The applicant can modify the content of its application till the final submission to NPC. The hard copy of the online application is not required to be sent to NPC but may be retained by the applicant for its reference.

The last date to receive the entries by any mode, in the prescribed Application Proforma is **15th September, 2016.**

Annexure-X**Evaluation Criteria**

1. The marks are distributed in the ratio of 70:30 between quantitative and qualitative factors.
2. In case of quantitative factors, weightages is distributed in the ratio of 60:40 for the growth (over three year) and the level of performance (in reference year) respectively. For calculating of quantitative productivity ratio, we have taken into account both levels and growth factors.

S. No.	Quantitative Parameters	Growth	Level	Total
1	Profitability Ratio	6	4	10
2	Return on investment in Plant & Machinery	4.2	2.8	7
3	Plant & Machinery Turnover Ratio	5.4	3.6	9
4	Working Capital Utilization Ratio	4.8	3.2	8
5	Equity Debt Ratio	4.2	2.8	7
6	Inventory Turnover	5.4	3.6	9
7	Material Productivity	5.4	3.6	9
8	Reverse of Labor Cost per Unit Sales	3.6	2.4	6
9	C/L Ratio	3.0	2.0	5
Maximum Marks for Quantitative Factors				70

3. In case of qualitative factors, individual weightages is given to each question based on its importance:

S. No.	Qualitative Parameter	Maximum Marks Allocated to each Option	Maximum Marks Allocated to each Question
1	Please select a category for which your Manufacturing unit is applying: (<i>Select at least one option</i>) a) Productivity & Process Innovation b) Productivity & Product Innovation	-	-
2	Please specify the Name/Title/Identification of your innovation submitted to NPIA (2015-16) (<i>Mandatory</i>)	-	-

S. No.	Qualitative Parameter	Maximum Marks Allocated to each Option	Maximum Marks Allocated to each Question
3	Please give description (max 300 words) of your innovation. <i>(Guidelines: What is the innovation? Why is it innovative? What were the objectives? How does it work technically? Why innovation is better? What unique problem does it solve? Please use additional sheets, if required)</i> (Mandatory)	8	8
4	Please identify the Benefits & Usefulness (max 300 words) of your innovation? <i>(Guidelines: What are the advantages your invention has over other solutions? How the limitations overcome? How testing done? How it is useful? What are the immediate and future applications of innovation? Please use additional sheets, if required?)</i> (Mandatory)	8	8
5	Do you have the sketch/drawing/photo of the innovation submitted as S. No.2 above? (Mandatory) a. Yes, sketch/drawing/photo will be provided as and when requested by NPC	-	-
6	Is your innovation commercially proven? a. Yes, the supporting document is available to prove the above claim. b. No	2 0	2
7	Have you received a Patent or Trademark for any product manufactured by your Unit? a. Yes, the patent document is available to prove the above claim. b. Yes, the trademark document is available to prove the above claim. c. No	2 1 0	2
8	Is your Manufacturing Unit certified with quality standard like ISO 9001, GMP (Good Manufacturing Practice), etc. from a recognized authority: a. Yes, the supporting document is available to prove the above claim b. No	2 0	2
9	Is your Manufacturing Unit certified with environmental standards like ISO 14000, etc. from a recognized authority: a. Yes, the supporting document is available to prove the above claim b. No	2 0	2
10	Is your Manufacturing Unit certified for energy conservation with ISO 50001, Solar/Biogas Power Generation, etc. from a recognized authority: a. Yes, the supporting document is available to prove the above claim b. No	2 0	2

S. No.	Qualitative Parameter	Maximum Marks Allocated to each Option	Maximum Marks Allocated to each Question
11	Is your Manufacturing Unit certified for employee safety with ISO 18001 (Occupational Health & Safety), etc. from a recognized authority: a. Yes, the supporting document is available to prove the above claim b. No	2 0	2
12	Have you applied/received an Award from NPC under NPIA (2013-14) or NPIA (2014-15) for the innovation at S. No. 2 above? a. Yes b. No	0 2	2
13	Would you like to support your answer in S.No. 3 & 4 above through power point presentation/video? (Optional) a. Yes, the presentation/video will be provided as and when requested by NPC b. No	-	-
Maximum Marks for Qualitative Factors		-	30

4. The total score obtained by Industrial Unit will be the sum of marks obtained for Quantitative and Qualitative Factors.

Annexure-Y**Quantitative & Qualitative Factors/Parameters**

The factors/parameters for evaluation/assessment have been grouped into following three broad measurable categories:

- I. Result based parameters:** The result based parameters reflects operational efficiency of the manufacturing industrial unit and can be measured by computing Capital productivity, Labour productivity, Material productivity and Energy productivity. Besides there are profitability parameters like profit, sales, equity, debt etc and production related parameters such as capacity utilization, raw material & by product utilization and waste minimization, which can also be considered under this category.

1. Profitability Ratio

It is the ratio of Profit before Tax to Annual Sales Turnover and it measures the amount of profit gained per unit of sales generated. Profitability is a commonly used yardstick for judging the performance of a Company. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{Profitability Ratio} = \frac{\text{Profit Before Tax}}{\text{Annual Sales Turnover}}$$

2. Return on investment in Plant & Machinery

It is computed as Profit before tax over Gross Investment on Plant & Machinery during the year before depreciation. A high ratio suggests management's ability to make good use of its tangible and intangible assets. Low ratio may be caused by large outlays for fixed assets. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{RoI} = \frac{\text{Profit Before Tax}}{\text{Gross Investment}}$$

Where

RoI = Return on Investment in Plant & Machinery;

Gross Investment = Gross Investment on Plant & machinery during the year before depreciation;

3. Plant & Machinery Turnover Ratio

It measures the number of times plant & Machinery are "turned over" to sales or how much sales are generated by the Plant & Machinery utilized. It is the ratio of Annual Sales Turnover to Gross investment on Plant & Machinery during the year before depreciation. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{PMT Ratio} = \frac{\text{Annual Sales Turnover}}{\text{Gross Investment}}$$

Where

PMT Ratio = Plant & Machinery Turnover Ratio;

Gross Investment = Gross Investment on Plant & machinery during the year before depreciation

4. Working Capital Utilization Ratio

It is the ratio of Annual sales Turnover to working capital employed. Working capital is computed by subtracting current liabilities from current assets. It indicates how best the working capital is being utilized. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{Working Capital Utilization Ratio} = \frac{\text{Annual Sales Turnover}}{\text{Working Capital}}$$

5. Equity Debt Ratio

The Equity Debt ratio is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company's assets. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{Equity Debt Ratio} = \frac{\text{Equity or Capital}}{\text{Debt}}$$

Where

Debt = Debt is loan taken from Financial Institution/Bank

6. Inventory Turnover

The inventory turnover is a valuable measure of selling efficiency and inventory quality. It is the ratio of Annual sales Turnover to average inventory. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{Inventory Turnover} = \frac{\text{Annual Sales Turnover}}{\text{Inventory}}$$

7. Material Productivity

Material Productivity measures how well material resources have been utilised to come up with the desired finished products. Material resources include raw materials, packaging materials, supplies and other material brought from outside. The ratio has been calculated by dividing sales from sum of raw material and energy costs which are assumed to represent the total input costs. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{Material Productivity} = \frac{\text{Annual Sales Turnover}}{\text{Raw Material} + \text{Energy Consumed}}$$

8. Reverse of Labor Cost per Unit Sales

It is the ratio of wages paid to employees over sales of products in value terms. Wages refers to salary & wages of not only of direct workers but also indirect workers. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{Reverse of Labor Cost per Unit Sales} = \frac{\text{Annual Sales Turnover}}{\text{Total Employees Benefits}}$$

Where

Total Employee Benefits includes Wages, Salary, PF, Bonus, etc

9. C/L Ratio

It is generally not enough to know the trends of Labour Productivity and Capital Productivity in isolation. Knowing for instance that labour productivity is increasing does not necessarily mean that workers are getting to be more productive. The reason can also be attributed to the addition of a new machine. Therefore, the trend exhibited by C/L ratio explains the behaviour of both labour and capital. It has been calculated by dividing fixed assets by salary and wages. For the purpose of the NPIA 2015-16 schemes, the following formula has been arrived at for further evaluation and analysis:

$$\text{C/L Ratio} = \frac{\text{Gross Investment}}{\text{Total Employee Benifit}}$$

Where

Gross Investment = Gross Investment on Plant & machinery during the year before depreciation

- II. Product Innovation based parameters:** Product innovation includes both goods & services introduced by a manufacturing industrial unit whose fundamental characteristics or intended uses are new or differ significantly from other products or services traditionally produced by the industrial unit. Product innovations can be introduced by developing brand new products, by significantly modifying existing products or purchasing the right to produce/copying products that are not being produced traditionally by the industrial unit.
- III. Process innovation based parameters:** Process innovation includes production techniques, production processes, system monitoring and processes introduced by the industrial unit that are new to the industry. Process innovations can be introduced by developing brand new equipment, techniques and processes by significantly modifying existing equipment, techniques or processes or by purchasing the right to use /copying, equipment, techniques and processes that are not currently used by the industrial unit. Implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.