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**Date:** 23<sup>rd</sup> Feb 2022

To,

**Shri Anil Kumar Bhardwaj**  
**Advisor (B&CS)- II**  
Telecom Regulatory Authority of India (TRAI)  
Mahanagar Door Sanchar Bhawan,  
J.L. Nehru Marg, (Old Minto Road)  
New Delhi - 110002, India

**Sub:** Comments on behalf of All India Digital Cable Federation on the Consultation Paper on  
*"Promoting Local Manufacturing in the Television Broadcasting Sector"* dated  
22.12.2021 ("CP").

Dear Sir,

We would like to thank the Authority for providing us with the opportunity to share our comments on the CP.

At the outset, we humbly acknowledge and appreciate the efforts that the Authority has put forth in initiating a CP on such a significant issue that is in relation to encouraging and proliferating the growth of local manufacturing in cable television and broadcasting sector.

While the Authority has, in the past, issued two consultation papers, one in 2010 and the other in 2017, in relation to promoting growth of local manufacturing in telecommunication sector, this is the first time that the Authority has initiated a consultation on a similar subject, but the same is specifically in relation to broadcasting and cable television sector.

We completely agree and stand supportive of the vision that is envisioned by the Authority of making India a manufacturing hub in all sectors. The same is also one of our national priorities of which we are fully cognizant of.

In this regard, please find attached our question wise response attached as Annexure -1 to this letter.

Thanking You

Yours Faithfully

For, ALL INDIA DIGITAL CABLE FEDERATION



**Manoj P. Chhangani**  
**Secretary General- AIDCF**

**ISSUES FOR CONSULTATION**

**Q1: What is your assessment in respect of local manufacturing in the television broadcast sector of India? Is there requirement for a focused action in promoting local manufacturing in the television broadcast sector? Please elaborate.**

**AND**

**Q2. Do you think there is an adequate opportunity, market, and/or demand for the manufacturing of television broadcasting (headend, back haul transmission, CPE and others) equipment in India? Please provide your comments with supporting inputs and data. What are specific requirements of special interfaces and features needed in transmission equipment used in Television broadcasting sector? Elaborate with respect to specific equipment like headend interface equipment and CPE/STB.**

**AND**

**Q3 (a). Do Indian manufacturers have adequate capabilities to meet the broadcasting (headend, transmission, CPE and others) equipment demand of the Indian cable television sector?**

**Q3 (b). If yes, then what new measures, if any, are required for the local manufacturing sector to capture a greater market share?**

**Q3 (c). If your answer to Q3(a) is negative, then please comment what measures can enable local Industry to consider manufacturing of equipment for broadcasting (headend, transmission, CPE and others) segment? Please provide supporting inputs with relevant details.**

**AND**

**Q5. What measures do you suggest for improving the competitiveness of local manufacturers? Please elaborate your comments with supporting inputs and data.**

**AIDCF Response:** The Authority in the CP has rightly acknowledged that before promoting efforts for local and indigenous manufacturing in the broadcasting and cable television sector, we need to first assess and ascertain the quantum of demand and requirement of equipment associated with the broadcasting and cable television sector, irrespective of the same being locally manufactured or imported.

We further state that as the Authority has rightly highlighted basis the 25<sup>th</sup> Report of Standing Committee on Information Technology (2020-2021) that most of the major broadcast equipment, i.e., SW Transmitters, FM transmitters, Diplexer, measuring equipment, programme production software, Digital transmitters, Camcorder, Non-Linear Editing (NLE), Production Switcher, Routing Switcher, Dynamic Frequency Selection (DFS), Personal Digital Assistant (PDA), Measuring equipment, Encoder, High Power Amplifier (HPA), Integrated Receiver/Decoder (IRD), Up-converter & Down-converter, Modulator, etc., are not manufactured in the Indian market and are imported from foreign vendors. Bulk of deployment in the television broadcast sector is being met through imports and presently, the technological and business ecosystem does not stand supportive of domestic manufacturing of such equipment. The equipment(s) that are deployed for transmission of cable television can be classified and listed into the following three categories:

1. **Headend Equipment** that majorly comprises of Encoders, IRDs, Multiplexers, Conditional Access System (CAS) and Subscriber Management System (SMS).
2. **Transmission Equipment** like Gigabyte Passive Optical Network (GPON), Optical Line Terminal (OLT), Amplifier, Optical Fiber Cables (OFC), Radio Frequency (RF) Coaxial Cables
3. **Consumer Premises Equipment** like Optical Network Terminal (ONT), Set top Box (STB), Audio and Video (AV) cables.

We state that before suggesting any measures for promoting indigenous manufacturing for each of the aforesaid segment, it is imperative for us to first analyse the regularity and the day to day demand that the stakeholders face, of equipment associated with each such category.

With regard to the Headend, we state that presently, most of demand associated with headend equipment is catered through imports. The demand of headend and other associated equipment saw a peak during the implementation of digitalisation in 2012-17, wherein most of the MSOs installed equipment that were imported from American, European and Chinese manufacturers. The Authority would be aware that with the completion of digitalisation in 2017, the demand for headend equipment has tapered off and limited circumstances like expansion, upgradation or replacement or new registrations will only call for deployment of headend related equipment. Moreover, encouraging indigenous manufacturing for headend and associated equipment with headend, at this stage, will require investment and resources of huge magnitude which is not likely to give lucrative and commercially gainful returns on account of low and limited instances of demand.

With regard to Transmission Equipment as well as Consumer Premises Equipment, the demand is comparatively much higher than that of Headend related Equipment. Moreover the Transmission Equipment and Consumer Premises Equipment that are used for backhaul connectivity and for provisioning access connectivity to the customer premises in the television and broadcasting sector are broadly the same as those being in Telecommunication sector and for provisioning of broadband services. Demands for these equipment(s) are therefore not likely to see any depletion as is the case with Headend Equipment. We therefore suggest adoption of the following measures for facilitating domestic and indigenous manufacturing of Transmission Equipment as well as Consumer Premises Equipment:

- i. For setting up a manufacturing plant for local production and manufacturing of equipment, the Government may provide land at subsidised rates to the local manufacturers or may grant a land subsidy to such manufacturers. The extent of such subsidy and areas, can be determined by the Government by taking into consideration the nature of equipment for which a plant is sought to be set up.
- ii. The Government may introduce a one-time 100% reimbursement of stamp duty and registration charges paid with respect to lease/purchase of land, industrial plots or tenements.
- iii. The Government may introduce a one-time 100% reimbursement of land conversion fee payment that may be applicable in case of land conversion fee payment made for converting land from agricultural use to industrial use.

- iv. The Government may also introduce a separate subsidy for plant and machinery by virtue of which the manufacturers who prepare the finished product by virtue of assembling various components and parts, can avail such subsidies which will act as an incentive for them to engage in local manufacturing of finished equipment.
- v. The Government may also introduce special funding schemes with low interest rates as well as tax benefits for the manufacturers who intend to engage in local manufacturing of several components associated with any equipment or finished products.
- vi. The Government may also introduce additional incentives in the form of tax holidays and/or reduced taxes on domestically manufactured Transmission Equipment and/or Customer Premises Equipment like STBs, OLTs and ONU. The Government may also introduce higher import duties on finished Customer Premises Equipment (CPE) that are imported. This will encourage the buyers to purchase from Indian manufacturers who procure and locally assemble the finished products and will provide an impetus and an edge to such manufacturers over imported products which do not use locally deployed resources.
- vii. The Government may in its diplomatic capacity, collaborate with foreign manufacturers for promoting technology transfers as the same will enable and equip the local manufacturers to themselves indulge in the domestic production of both the equipment (finished product) as well as the components of the equipment and the same will promote indigenous manufacturing of equipment.
- viii. The Government may also grant electricity at subsidised rates for a period of at least five years from the date of commencement of commercial production.
- ix. The Government may subsequently, i.e. after a period of five years, introduce power tariff reimbursement by introducing subsidy on electricity/power consumed by the local manufacturer while undertaking indigenous production and manufacturing of equipment.
- x. The Government may also incentivise the domestic manufacturers by providing a production linked incentive to the tune of 5.00%- 10.00% of net sales turnover for a period of five years from the date of commencement of commercial manufacturing and indigenous production.

**Q4. What are the reasons for the limited market share of local STBs? Do the local manufacturers face any entry/exit barriers such as, but not limited to cost competitiveness, and/or technology-related issues? Please elaborate with supporting inputs.**

**AND**

**Q6. What other measures can be taken to encourage the adoption/usage of domestically produced STBs and other Consumer Premises Equipment among the distribution platform operators?**

**AIDCF Response:** The requirement of set top boxes (STBs) in India is largely catered by numerous Korean and Chinese vendors which offer STBs at very economical rates. This onslaught is formidably responsible for the inability of indigenous manufacturing as the growing demand for STBs gets ostensibly catered by the foreign manufacturers. Another

challenge that the STB manufacturing industry is thwarted with, is the dependence on foreign Conditional Access System (CAS). The foreign CAS companies already have pre-existing tie-ups with other stakeholders like System on Chip (SoC) providers, STB manufacturers, System Integrators, etc. Even if the domestic manufacturers attempt to enter into an understanding/agreement with global CAS companies, under most circumstances, they are not subjected to convenient/competitive terms or conditions. Therefore, lack of effective collaboration between the domestic manufacturers and global software companies, act as a major impediment towards STB manufacturing in India.

We further state that chip manufacturing is non-existent in India. Microprocessors are being imported from foreign vendors. Further, owning an assembly line is often viewed as an expensive affair in India. Only few companies in India are being able to afford such kind of technological and business setup. All of these factors are collectively responsible for limited market share of indigenous STBs.

It is suggested that for proliferating the growth of indigenous manufacturers of STBs, measures that have been suggested as a response to Question 1, i.e. benefits of availing land, plant and machinery at subsidized rates, subsidizing the process of technology transfers and introduction of financial incentives, should be introduced by the Government. The Indian Government should incentivize public-private partnerships to ensure successful technology transfer. Such transfers will not only encourage indigenous manufacturing by equipping the local manufacturers with the technology of comparable standards, required for production, but will also create employment opportunities. Additionally, the existing financial incentives should also be redesigned in order to minimize transaction costs and maximize technology incubation and commercialization. The domestically manufactured STBs should be exempted from taxes. The Government should also incentivise the domestic manufacturers by providing a production linked incentive to the tune of 5.00-10.00% of net sales turnover for a period of five years from the date of commencement of commercial manufacturing and indigenous production.

**Q7. MeitY supported development of local CAS, which has been available for more than two years. What further measures, if any, should be undertaken to enable increase the market share of local STBs that are designed in India, running on Indian CAS and made in India? Please elaborate with reasoning.**

**AIDCF Response:** The Authority would acknowledge that while over 1.8 million of STBs were integrated with i-Cas, the DPOs that deployed such STBs faced a lot of issues in terms of technical setbacks. Such STBs having i-CAS were neither amenable to the technical system requirements nor were statutorily compliant in terms of security standards and parameters. The Authority would acknowledge that absence of a secured system defeats the whole purpose of addressability. It is therefore suggested that the past experiences with i-CAS be analysed and reviewed on a holistic basis. It is imperative that indigenous development of CAS should be proliferated in such a way that the same should not only be offered at a competitive and affordable price but should also match the quality and standards of CAS that are being offered by foreign vendors. It is also suggested that the Government may consider opting for technology transfer at subsidized rates instead of funding a new technology. The Authority would acknowledge that developing a new technology will not only require significant resources for Research & Design (R&D) but will also require considerable amount of time.

Instead, opting for technology transfer would ensure that the local manufacturers of STBs can be equipped with the technology for production and the same will also generate opportunities for employment. It is also suggested that at all times, such CAS should be compliant to all technical parameters and standards as may be issued by the Authority from time to time and shall also be subjected to a uniform testing and certification mechanism as has been enshrined by the Authority. This will also encourage the DPOs to deploy locally developed CAS as a part of their digital addressable systems.

**Q8(a). As per the estimates, yearly broadcasting imports in India amount to more than USD 20 billion. Do you think this market size reflects high potential for local manufacturers for broadcast equipment?**

**Q8(b) If yes, why the television broadcast sector is still dependent on imports for deployment in networks? Please elaborate.**

**AIDCF Response:** We state that while the broadcasting imports in India may amount to more than USD 20 billion on an annual basis, however, placing reliance on our response to Question No. 1, we state that for determining the potential for proliferation of indigenous manufacturing under any instance, it is imperative to first analyse the regularity and the day to day demand that the stakeholders face, of equipment associated with each such category of broadcasting and cable television sector, i.e. headend equipment, transmission equipment and customer premises equipment. We seek to bring to the kind attention of the Authority that out of an approximate USD 20 billion, an approximate value of USD 4.68 billion deals with equipment that are primarily deployed in the broadcasting sector, while an approximate value of USD 15.43 billion are equipment that are deployed across multiple sectors, including for provisioning of broadband and telecommunication services. It is imperative to note that an approximate value of 7.55 billion is towards transmission and customer premises equipment.

Taking into consideration the aforesaid and reiterating our response to Question 1, we state that local and indigenous manufacturing should be encouraged in the sector of transmission equipment and customer premises equipment as the demand for equipment with respect to such categories are regular and are not likely to face any deficit, unlike the headend equipment that will arise only under limited circumstances like expansion, upgradation or replacement or new registrations. In this regard, we yet again seek to draw the kind attention of the Authority to our introductory comment and establish before the Authority that any measures for encouraging local manufacturing should be preceded by adopting and carving out measures for sustenance of the broadcasting and cable television sector, the future of which is at grave risk on account of continuous churn of subscribers to unregulated platforms that offer the same content at comparatively lower prices without being subjected to the framework of applicable regulations.

The Authority has itself acknowledged that majority of the transmission equipment and customer premises equipment are presently being imported from countries like China or South Korea. Presently, we do not have a sustainable business ecosystem to promote domestic manufacturing of such equipment. Moreover, with respect to STBs, the Authority has recognised that a large number of DPOs are importing the same from Korea and China as the foreign manufacturers are offering the STBs at much economical prices and are also suited to their day to day business and technical requirements. We suggest that for promoting indigenous manufacturing, it is imperative that the Government creates a sustainable business

and technological ecosystem by adopting measures as have been suggested in our response to Question No. 1. Introduction of technological transfers, financial incentives in terms of tax exemption and tax holidays and production linked incentive measures will significantly encourage and promote indigenous manufacturing of transmission and customer premises equipment.

**Q9(a). Looking beyond local markets, can Indian industry gear itself to export television broadcast equipment for export markets?**

**Q9(b). If yes, what specific measures may be required to enable local manufacturers to compete in global market for television broadcast equipment? Please elaborate with relevant figures and inputs.**

**AIDCF Response:** Introduction of measures that have been suggested as a part of our response to Question No. 1 can proliferate and encourage local manufacturers to formidably establish themselves in the Indian market and address and cater to the local demands within a period of five to ten years of introduction of such measures. Once they are verily established in the domestic market, they can subsequently also compete in global market in the long run, i.e. subsequently within a period of fifteen years from the implementation of the aforesaid measures.

**Q10. Is there potential for promoting local manufacturing of all types of broadcasting equipment more specific to television broadcasting equipment, e.g. head-end, transmission, CPE etc. or at this stage the industry should focus on specific segment like Customer Premises Equipment / Set-Top Box? Please specify the segment (if any) and support your answer with relevant market size in terms of value and volume.**

**AIDCF Response:** Please refer to our Response to Question No. 1 and that comprehensively addresses and answers this issue.

**Q11(a). Do the existing policy measures and fiscal initiatives adequately address the needs of the Indian Television Broadcast manufacturing sector?**

**Q11(b). If yes, please provide supporting note(s) to your answer.**

**Q11(c). If the answer to Q11(a) is negative, what policy measures are required to boost local electronics manufacturing in the television broadcasting equipment sector? Please provide details in terms of short-term and long-term objectives.**

**AIDCF Response:** We state that as has already been established by us in our aforesaid responses, the existing fiscal policies are not adequate to promote and encourage the indigenous and local manufacturing of television and broadcasting sector equipment in India. We therefore suggest adoption of the following fiscal initiatives for promoting indigenous manufacturing:

**A. Short-term measures:**

1. While the government has already notified the import of coloured television in the 'restrictive list', introduction of Production Linked Incentive on domestic manufacturing of television sets will also proliferate and encourage local manufacturing. Domestic

manufacturing presently provides for 12-15% value addition for televisions in India<sup>1</sup>. Production linked incentive to the tune of 5-10% on the annual sales for a period of five years will provide huge impetus to domestic manufacturing of television sets in India and will increase the value addition to 30%. This will also encourage in making India an export hub for televisions.

2. Presently, open-cell television, i.e. that of LCD/LED Display Panel, manufacturing is completely controlled by Chinese manufacturers and there are no domestic manufacturers for open cell television. The government should encourage local manufacturers to engage in the manufacturing of open-cell television. For setting up a manufacturing plant for local production of open cell televisions, the Government may provide land at subsidised rates to the local manufacturers or may grant a land subsidy to such manufacturers. The extent of such subsidy can be determined by the Government by taking into consideration the nature of equipment for which a plant is sought to be set up. The area for setting up a manufacturing plant should be a disaster free zone and should be near the coastal areas for encouraging exports, in the long run.
3. Tax holiday as per 80-1A of Income Tax act shall be introduced for local manufacturers that are engaged in the manufacturing of transmission and customer premises equipment.
4. The Government should also introduce special financial assistances from external agencies like India Infrastructure Finance Co, IDFC etc. to be extended to broadcasting sector.
5. The Government may also introduce additional incentives in the form of reduced taxes on domestically manufactured Transmission Equipment and/or Customer Premises Equipment like STBs, Optical Line Terminal (OLT) and Optical Network Unit (ONU). The Government may also introduce higher import duties on finished products. This will encourage the buyers to purchase from Indian manufacturers who procure and locally assemble the finished products and will provide an impetus and an edge to such manufacturers over foreign products that are not deploying local resources in the country.
6. Till such time, the local manufactures are not able to manufacture equipment as a 'finished product' in the category of transmission equipment and customer premises equipment, the Government should reduce the import duties on the components of such equipment for encouraging domestic assembling of equipment.

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<sup>1</sup> <https://www.livemint.com/industry/manufacturing/tvsetmakersrampupcapacityeyeingsops-11612743827483.html>



**B. Long term measures:**

1. The Government should establish training centres for equipping the local manufacturers with requisite skills to manufacture, manage and operate factories, high end optic screen, highly automated machines that are required for manufacturing of televisions, transmission and customer premises equipment.
2. The Government may fund Research and Design initiatives in the long run that may pave way for innovation, research, design and development, which will make the industry competitive. Encouraging partnerships with industry/civil society will significantly reduce the project cost for promoting indigenous manufacturing and will also make India an export hub for television sets, transmission and customer premises equipment.
3. The Government should create Special Economic Zones (SEZs) focused on manufacturing of equipment related to broadcasting, television, cable and telecommunication sector.

**Q12. Should the government extend the PLI scheme to the television broadcasting sector? Which equipment deployed in the television broadcast network should be covered under the PLI scheme? Please elaborate with supporting note(s).**

**AIDCF Response:** As established as a response to the aforesaid questions, production linked incentive should be introduced on the manufacturing of television sets, transmission equipment and customer premises equipment. The Government should incentivise the domestic manufacturers by providing a production linked incentive to the tune of 5.00%- 10.00% of net sales turnover for a period of five years from the date of commencement of commercial manufacturing and indigenous production.

**Q13. There is a need to have a standard understanding of the scope of 'local manufacturing' amongst all the stakeholders to bring uniformity in the consultation. What should be the scope and definition of 'local manufacturing' in the lines of manufacturing vis-à-vis assemblage of the television broadcasting equipment and their core components?**

**AIDCF Response:** 'Local manufacturing' in the context of broadcasting and cable television sector may be defined as *"the process of manufacturing in terms of which any product is made or developed or created using  $\geq$  20% of components sourced from component/service providers in India."* We propose that the percentage of locally sourced components/services should increase by at least 5-10% every year for any equipment to continue to qualify as 'local manufacturing'.

**Q14. Will a stronger R&D ecosystem enable the growth of local broadcast manufacturing sector? If yes, please suggest steps to promote and incentivize R&D undertaken in India to build domestic capability in television broadcast equipment manufacturing.**

**AIDCF Response:** The Authority would acknowledge that significant resources and considerable amount of time will be required for promoting Research & Design (R&D) in the cable television and broadcasting sector. Therefore, we suggest that promotion of R&D

mechanism should be viewed as a long term measure. We suggest that the government itself in its diplomatic capacity should primarily collaborate with foreign manufacturers for technology transfer which will equip the local manufacturers to manufacture the equipment utilizing the known and available technology. We suggest that when domestic manufacturing is channelized and demands for equipment are catered locally, with the help of technology transfer and financial incentives thereof, the Government should then promote Research and Design as a long term measure that will pave way for innovation, research, design and development and will make the industry competitive.

**Q15. In view of the concerns raised about Free Trade Agreements (FTAs) affecting the cost competitiveness of the local products, what policy measures do you suggest to address this issue? Please elaborate with supporting note(s).**

**AIDCF Response:** We are of the view that there should not be any intervention with the benefits that are available to the stakeholders on account of India being a signatory to the FTAs. Aside to that, the Government should undertake distinct and independent measures to develop a sustainable business and technological ecosystem in relation to broadcasting and cable television sector. Such measures have been identified and have been discussed at length as a response to the aforesaid questions. Summarily, introduction of measures of technology transfer by virtue of which the government itself in its diplomatic capacity may collaborate with the foreign manufactures, introduce financial incentives in terms of tax exemption and tax holidays and production linked incentive measures will significantly encourage and promote indigenous manufacturing of equipment associated with television and broadcasting sector.

**Q16(a). Do you think that there is a cost disparity due to additional expense on infrastructure vis-à-vis competing nations that adds to disadvantage for local manufacturers?**

**Q16(b). If yes, please elaborate along with supporting inputs and itemwise comparison, such as with reference to availability of power, labour, land, strong supply chain and logistics, etc.**

**AIDCF Response:** Presently, the technological and business ecosystem in India does not stand supportive of domestic manufacturing of equipment associated with broadcasting and cable television sector. We reiterate that the Government should undertake measures to develop a sustainable business and technological ecosystem in relation to broadcasting and cable television sector. Such measures have been identified and have been discussed as a response to Question Number 1. The Government should also collaborate with foreign manufacturers in its diplomatic capacity by adopting measures of technological transfers, financial incentives in terms of tax exemption and tax holidays and production linked incentive measures will significantly encourage and promote indigenous manufacturing of equipment associated with television and broadcasting sector.

**Q 17: Please list (item-wise) the cost disadvantages that an Indian manufacturer faces vis-à-vis its international competitors. Please quantify such disadvantages in percentage terms to enable broad estimation.**

**AIDCF Response:** No comments.

**Q18. Any other issue you may like to raise relevant to the present consultation?**

**AIDCF Response:** No comments.