**MAHARASHTRA WATER RESOURCES REGULATORY AUTHORITY**

**Approach Paper (August 2019)**

**Approach on Determination of Bulk Water Tariff 2020-23**

1. The Authority, as mandated in Section 11 (d) of the Maharashtra Water Resources Regulatory Authority Act, 2005 ("Act" for short) shall carry out the process of determination of Bulk Water Tariff system after ascertaining the views of the beneficiary public, based on the principle that the water charges shall reflect the full recovery of the cost of the irrigation management, administration, operation and maintenance of water resources project either in Government/Semi-Govt. Corporations or Private sector or Bulk Water Supply Entity (BWSE);
2. Due consultation with the experts in the field and the officers of the line department shall also be done whenever required on specific issues.
3. Authority shall adopt following procedure for establishing water tariff system and Criteria for water charges:

|  |  |
| --- | --- |
| 3.1 | Finalization of 'Admitted Operation & Maintenance (O & M) Cost' |
| 3.2 | Reviewing the user categories |
| 3.3 | Projecting category wise water use from the available data |
| 3.4 | Apportionment of 'Admitted O & M Cost' across user categories based on certain Criteria |
| 3.5 | Determination of incentives and disincentives across user categories keeping in view the objects of the Act. |
| 3.6 | Determination of tariff across user categories. |

1. **Finalization of 'Admitted O & M Cost'** :

|  |  |
| --- | --- |
| 4.1 | The cost elements to be considered in annual O & M Cost shall include;  Cost of 'Irrigation Management', 'Cost of Administration' and the 'Cost of Maintenance' of Water Resources Project. Provided further that 'Cost of Maintenance' shall include cost of both 'Preventive Maintenance' and 'Operative Maintenance' but exclude cost of special repairs and restoration of old dams of canal systems. |
| 4.2 | Bulk Water Supply Entity shall submit the projected cost estimates for the control period. If cost estimates are not received timely, Authority will decide the reasonable cost based on past data available with the Authority. |
| 4.3 | Thereafter, consultation with experts in the field and WRD/BWSE shall be done to ensure the reasonability of the projected cost estimates. |
| 4.4 | The comments of the beneficiary public shall also be sought, by making available these cost estimates on the website of the Authority. |
| 4.5 | The Authority, considering the comments of the experts in the field and beneficiary public, and after conducting due scrutiny and enquiry shall finalize the 'O & M Cost'. As the Regulator is expected to protect the interests of all stakeholders optimally, the decision of the Authority arrived after following due process and binding in this regard shall be final and conclusive. The O & M Cost so finalized shall be considered as 'Admitted O & M Cost' for further purpose of tariff determination. The details of 'Admitted O & M Cost' for the previous control period and the revenue realization can be referred as **Annexure - 1.** |

1. **Reviewing the User Categories :**

|  |  |
| --- | --- |
| 5.1 | Authority will review the existing user categories in consultation with experts in the field and line departments/BWSE and may add/delete/modify the existing user categories i.e. Agriculture, Domestic and Industrial. |
| 5.2 | The comments of the beneficiary public shall also be sought, by making available the relevant details and background on the website of the Authority. |
| 5.3 | The Authority, considering the comments of the experts in the field and beneficiary public and after conducting due scrutiny and enquiry shall finalise the user categories. The decision of the Authority in this regard shall be final, conclusive and binding. |

1. **Finalising Projected Category wise Water Use:**

|  |  |
| --- | --- |
| 6.1 | Bulk Water Supply Entity shall furnish all relevant information along with the Application pertaining to previous as well as control period under consideration, such as storage facilities available, irrigation potential available, irrigation potential actually in use, category wise water uses, evaporation and other losses etc. In the event of non-receipt of data or information from the Bulk Water Supply Entity, Authority will consider the information as provided in the annual Irrigation Status Reports and latest available data. |
| 6.2 | The Authority will scrutinize the information regarding category wise water use, projected for the control period. |
| 6.3 | Thereafter, consultation with experts in the field and BWSE shall be done over the projected category wise water use quantities. |
| 6.4 | The comments of the beneficiary public shall also be sought, by making available projection of category wise use for the control period on the website of the Authority. |
| 6.5 | The Authority considering the comments of the experts in the field and beneficiary public shall finalise the apportionment of the available water across user categories. The decision of the Authority in this regard shall be final and conclusive. |

Category wise water use data and projected water use in the past is can be referred as **Annexure - 2** for the sake of information.

1. **Apportionment of 'O & M Cost' across user categories:**

|  |  |
| --- | --- |
| 7.1 | The Authority, based on the experience gathered so far, will review the existing Criteria for apportionment of “O & M Cost” across user categories and prepare the Draft Revised Criteria. |
| 7.2 | Thereafter, consultation with experts in the field, the line departments and BWSE shall be done over the Draft Revised Criteria. |
| 7.3 | The comments of the beneficiary public shall also be sought, by making available Draft Revised Criteria for apportionment of 'O & M Cost' across the user categories by hosting it on website of the Authority. |
| 7.4 | The Authority, considering the comments of the experts in the field and beneficiary public, and after conducting due scrutiny and enquiry shall finalise the Criteria for apportionment of 'O & M Cost' across user categories. The decision of the Authority in this regard shall be final and conclusive and binding. |

Apportionment of 'O & M Cost' in Percentage as per past tariff Criteria is provided as **Annexure - 3** for the sake of information.

8) **Determination of incentives and disincentives across user categories keeping in view various objects of the Act** :

Objects of the Act, the achievement that can be facilitated by tariff intervention, can be referred as **Annexure -4**.

|  |  |
| --- | --- |
| 8.1 | Various incentives/disincentives/penalties considered in the previous Tariff System as per past Tariff Order can be referred in **Annexure 5**. |
| 8.2 | These incentives/disincentives/penalties will be reviewed in consultation with the experts in the field and beneficiary public and BWSE, while doing so the inputs of the impact survey available if any may also be considered. |
| 8.3 | The Authority considering the comments of the experts in the field and beneficiary public and after conducting due scrutiny and enquiry shall finalise various incentives and disincentives across the user categories. The decision of the Authority in this regard shall be final, conclusive and binding. |

9) The principles for the tariff determination so finalized in consultation with the experts in the field, line departments beneficiary public and BWSE shall be documented as "**Criteria for Water Charges**" and shall be shared with all by displaying the same on the website of the Authority.

10) **Determination of tariff across user categories** :

|  |  |
| --- | --- |
| 10.1 | Draft, User Category wise Bulk Water Tariff shall be determined by the Authority on the basis of apportioned 'Admitted O & M cost' and the category wise apportioned water use. The Authority may vary category wise bulk water tariff, for different source of categories based on nature of source on reasonable logic. |
| 10.2 | The comments of the beneficiary public and BWSE shall be sought, by making available Draft Tariff Proposal by hosting it on website of the Authority**.** |
| 10.3 | The Authority, considering the comments of beneficiary public and after conducting due scrutiny, shall finalise category wise Bulk Water Tariff across user categories. The decision of the Authority in this regard shall be final and conclusive. |

11) During Consultation with the experts in the field and the beneficiary public following issues will be clubbed together :

(a) Finalization of O & M Cost.

(b) Finalizing User Categories.

(c) Finalizing Category wise water use.

(d) Criteria for apportionment of 'O & M Cost'.

(e) Incentives and Disincentives.

(f) Finalizing source, categories and their weightages in tariff determination.

12) **Applicability of Tariff Order** :

The Tariff Order shall be applicable for the three consecutive water years, starting from the water year in which the Tariff Order is issued for the 3 consecutive water years and including any extension given by the Authority. The Tariff Order issued by the Authority shall be applicable to all Bulk Water Suppler Entities and Bulk Water User Entities in the respective jurisdiction or any Entity connected thereto in the State of Maharashtra.

**Annexure - 1**

**Statement showing past O & M Cost by WRD and Admitted Cost for Determination of Bulk Water Tariff**

(**Rs in Crore**)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year/Tariff Proposal** | **Establishment Cost** | **M& R cost** | **Total O& M Cost** | **Admitted Cost** |
| 2010-2013/ First Tariff Proposal | 434.55 | 196.59 | 631.44 | 631.44 |
| 2017-2020/ Second Tariff Proposal | 995.20 | 219.42+197.5 for energy charges of GLIS | 1412.12 | 1016.00 \* |

*\** Establishment cost in Govt. proposal is 70.40%, whereas it should be limited to 40% as per recommendations of 13th Finance Commission of GoI. State Govt. has not revised norms of O & M Cost including establishment. Also, Govt. has assumed that 5,412 vacant posts(50% of total vacant posts) will be filled ignoring the Govt. policy of ban on the same. Hence, Authority has adopted norms suggested by 13th Finance Commission with 10% inflation on the norms for the year 2014-15.

While calculating M & R Cost as per 13th Finance Commission Authority has taken latest data of irrigated and un-irrigated area from Maharashtra Water Resource Development Centre, Aurangabad for the year 2016-17. Also, provision of energy charges on 14 Govt. operated LIS which are not commissioned is deleted and M & R of LIS is taken with certain norms. Thus, O & M Cost finally admitted for tariff determination is Rs.1016.45 Crore. Govt. needs to outsource the extra manpower required in irrigation season on contract basis instead of filling the post on regular basis and reduce expenditure on establishment.

**Annexure - 2**

**Category wise water use details in the past as per Annual ISR**

**Figures in Mcum**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Designed Storage Capacity** | **Available storage (in Oct.)** | **Evaporation loss** | **Irrigation Water Use** | **Non irrigation water use** | **Total** |
| 2014-15 | 42608 | 24718 (58%) | 4389 | 17016 | 7481 | 28886 |
| 2015-16 | 42960 | 17712 (41%) | 4186 | 12110 | 7185 | 23482 |
| 2016-17 | 43241 | 29971 (69%) | 5371 | 19929 | 7730 | 33031 |
| 2017-18 | 43752 | 27607 (63%) | 5069 | 18573 | 7316 | 32909 |

**Observed Data for Non-irrigation Use as per ISR**

**Figures in Mcum**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ISR Year** | **Domestic Use** | **Industrial Use** | **Other Uses** | **Total** |
| 2015-16 | 4384.71 | 722.78 | 2373.81 | 7481.30 |
| 2016-17 | 4688.78 | 672.10 | 2369.32 | 7730.20 |
| 2017-18 | 4929.45 | 755.10 | 1631.57 | 7316.12 |

**Category wise water use adopted for tariff determination for the control period of 2017-20**

**Figures in MCUM**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Agricultural Use** | **Domestic**  **Use** | **Industrial Use** | **Total** |
| 1 | 26650.42 | 6664.88 | 723.69 | 34038.99 |

**Annexure - 3**

**Apportionment of O & M Cost in Percentage for the control period of 2017-20**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12.2. | Firstly a percentage weight shall be assigned to each of the four parameters which shall be common to all users. The values thus assigned shall be   |  |  |  | | --- | --- | --- | | **Parameter** |  | **Weightage assigned** | | **(i) Affordability** | - | 60% | | **(ii) Quantity & Accessibility** | - | 10% | | **(iii) Timeliness** | - | 10% | | **(iv) Impact on water quality** | - | 20% | |
| 12.3. | Secondly, a percentage weightage shall be assigned to each category of use for each of the four parameters viz. affordability, accessibility, timeliness and impact on water quality. The weightages thus assigned shall be   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Parameter** | **Weightages Assigned** | | | | | **Agriculture** | **Domestic** | **Industry** | **Total** | | **Affordability** | 15 | 15 | 70 | 100 | | **Quantity & Accessibility** | 60 | 15 | 25 | 100 | | **Timeliness** | 20 | 30 | 50 | 100 | | **Impact on water quality** | 10 | 45 | 45 | 100 | |
| 12.4. | The Application of percentage weightages of the parameters (Criteria Para 12.2) to the above weights shall result in the following allocation of O&M cost to the three categories of use   |  |  |  |  | | --- | --- | --- | --- | | **Parameter** | **Agriculture** | **Domestic** | **Industry** | | **Affordability** | 15x0.6 = 9.0 | 15x0.6 = 9.0 | 70x0.6 = 42.0 | | **Quantity & Accessibility** | 60x0.1 = 6.0 | 15x0.1 = 1.5 | 25x0.1 = 2.5 | | **Timeliness** | 20x0.1 = 2.0 | 30x0.1 = 3.0 | 50x0.1 = 5.0 | | **Impact on water quality** | 10x0.2 = 2.0 | 45x0.2 = 9.0 | 45 x0.2 = 9.0 | | **Total** | 19 | 22.5 | 58.5 | | **Say** | **19** | **22** | **59** | |

**Annexure - 4**

**Objects as per Maharashtra Water Resources Regulatory Authority Act, 2005 as amended time to time**

| **Section** | **Subject** |
| --- | --- |
| 11 (b) | Enforce Orders of the Authority |
| 11 (t) | Facilitate and ensure development, maintenance and dissemination of comprehensive hydro-meteorological information data base |
| 12(4) | Promote and implement sound water conservation and management practices throughout the State |
| 12 (5) | To preserve water quality within the State in close coordination with the relevant State Agencies. |
| 12 (7) | To ensure that the principle of “tail to head” irrigation is implemented by the River Basin Agency |
| 14 | no person shall use any water from any water source without obtaining the Entitlement from the respective River Basin Agency*(amended in 2011)* |

**Annexure - 5**

**Incentives/Disincentives**

| **Sr No.** | **Description** | **2010-13 Rates (GR dated 29-6-2011 )** | **2018-20 Rates ( MWRRA Order dt 11-01-2018)** |
| --- | --- | --- | --- |
| **I** | **Agricultural Irrigation** |  |  |
| 2 | Land holding Less than 2 ha  expect Sugarcane, Banana & Horticulture | 75% applicable rate Para 9 ( i ) | No concession |
| 3 | Land holding Less than 4 ha  PM package & Naxalite districts in Vidarbha expect Sugarcane, Banana & Horticulture | 50% applicable rate Para 9 ( ii ) | No concession |
| 4 | Dhan crops under agreement in Vidarbha | 50% applicable rate Para 9 ( iii ) | No concession |
| 5 | Farmers in Tribal sub-plan | No charging Para 9 ( v ) | No concession |
| 6 | Project Affected Persons | 75% applicable rate Para 9 ( iv ) | 75% applicable rate for flow  50% for lift Para 8.1 Annex 1 |
| 7 | Horticultural crops till actual production starts | No charging Para 9 (v i ) | No concession |
| 8 | Ex Malguzari tank areas | No charging Para 9 ( ix ) | SC decision applicable |
| 9 | Adoption of Drip & Sprinkler | 75% applicable rate Para 9 (vii ) | 75% applicable rate  Para 9.2 Annex 1 |
| 10 | Advance payment before start of season | 95% applicable rate Para 9 (viii ) | 90% applicable rate  Para 9.3 Annex 1 |
| 11 | Farmers having more than 2 children, birth after 8 June 2006  (Disincentive) | 150% applicable rate Para 10 ( i ) | Not mentioned |
| 12 | Use of water from wells in command areas | No provision of charging | No provision of charging |
| 13 | Pvt Lifts (Irrn.) unmetered use | No provision | 1.5 times flow rate for individual and 2 times for registered WUA for unmetered use  Para 4.3, 4.4 Annex 1 |
| **II** | **Domestic Use** |  |  |
| **14** | Recycling of treated waste water for agriculture | 75% applicable rate on water used for generating such waste water Para 4.2.2 MWRRA | No concession but treated waste water can be reused by ULBs with 60% applicable rate if reused for irrigation.  Para 10 |
| **15** | For non- submission of program of STP installation within 2 Years | 1.5 times applicable rate Para 4.2.3 MWRRA | 1.5 times applicable rate  Para 5.2 Annex 2 |
| **16** | Pvt Townships till construction | Industrial rates Para 4.2.1MWRRA Note (2) | Industrial rate at construction phase and 5 times applicable rate for completed and occupied portion  Para 4 Annex 2 |
| **17** | Use without agreement | No provision | 2 times applicable rate  Para 7.1 Annex 2 |
| **18** | For use without meter or meter not working | No provision | 2 times applicable rate  Para 7.3 Annex 2 |
| **19** | For unauthorized use to industries and water sports | No provision | 3 times applicable rate retrospectively  Para 7.2 Annex 2 |
| **20** | For use above norms  115-140% eligible use  > 140% eligible use | For +/- 10% of agreement Qty 1.5 times applicable | 1.5 times applicable rate  2 times applicable rate  Para 3 Annex 2 |
| **21** | Use of water from wells in command | No provision of charging | 50% applicable rate  Para 6 Annex 2 |
| **III** | **Industrial Use** |  |  |
| **22** | For Agro Industries | 75% applicable rate  Para 4.1.2 (1) MWRRA | 75% applicable rate  Para 4.1 Annex 3 |
| **23** | Demand reduced by at least 25% by recycling & reuse | 75% applicable rate  Para 4.1.2 (2) MWRRA | 75% applicable rate  Para 5.1 Annex 3 |
| **24** | Release of Effluent not treated with MPCB Standards | 2 times applicable rate  Para 4.1.3 MWRRA | 2 times applicable rate  Para 6.1 Annex 3 |
| **25** | Water use without agreement | No Provision | 2 times if metered  2.5 times if unmetered  Para 6.3 & 6.4 Annex 3 |
| **26** | Use without meter  (meter under repair) | No Provision | 1.25 times for first 2 months for repairs  1.5 times thereafter  Para 6.2 Annex 3 |
| **27** | Use of water from wells in command | No Provision of charging | 50% applicable rate  Para 4.2 Annex 3 |
| **29** | For use above prescribed norms > 115% eligible use | 1.5 times applicable for + 10% than qty as per agreement  Para 13.4 (4) | 1.5 times applicable rate  Para 3 Annex 3 |
| **30** | Late fee on arrears | 10% p.a.  Para 10 (ii) | 10% p.a.  Para 10.1 |
| **31** | Commitment charges | 5% of applicable rate  Para 13.4 (c) | 5% of applicable rate  Para 4.0 |