**Annex 6 Evaluation Criteria for Top 100 Technologies**

**Evaluation Criteria for**

**Air Pollution Prevention and Control Technology**

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| **No.** | **Indicator** | **Maximum****Points** | **Marking criteria** |
| 1 | Rationality of technological process | 7 | The process shall be short and complete, with high optimization of component integration, and the process design shall be reasonable. Unreasonable processes will receive 0 points. |
| 2 | Applicability and effectiveness of technology  | 5 | The technology shall be suitable for the treatment of industry-specific pollution and can effectively remove characteristic pollutants. Inapplicable technologies will receive 0 points. |
| 3 | Innovation and progressiveness of technology | 15 | The technology shall be technologically innovative partly or as a whole, with its innovations reaching an internationally advanced level. Out-dated or obsolete technologies will receive 0 points. |
| 4 | Effect on reducing pollutant emission  | 8 | The technology shall have fair effects on removing characteristic pollutants and can meet the related standards steadily. Its total removal amount shall be higher than that of similar technologies. A technology without obvious effects will receive 0 points. |
| 5 | Effect on controlling secondary pollutions  | 3 | In the process of pollution treatment, there shall be no transfer or diffusion of potential pollutants caused by the phase change or addition of substances. A technology that causes secondary pollution will receive 0 points. |
| 6 | Effect on solving industry-specific pollution | 6 | It can completely solve critical issues of an industry-specific pollution as a whole, and play a key role in industry-specific pollution treatment. A technology with poor effect will receive 0 points. |
| 7 | Maturity and practicality of technology | 10 | The technology has good industrialization level of its technological achievements with extensive engineering applications, and its practicability has been proved through engineering practices. A technology without practical engineering applications will receive 0 points. |
| 8 | Economic feasibility | 8 | On a comparable basis, its overall unit construction cost and operating cost (expense) shall be relatively low, and its application shall be economically feasible. A technology that severely deviates from average market cost will receive 0 points. |
| 9 | Energy and resource conservation  | 5 | Less construction space shall be occupied for the technology application, and less resources and energy shall be consumed during the facility operation. During the process of pollution treatment, the recycling or reuse of resources and energy can be realized. A technology that is incapable of energy and resource conservation will receive 0 points.  |
| 10 | Stability of facility operation | 5 | The facility shall be in stable working operation, and shall be able to realize given parameters with minimal instability and failures. A technology that fails to operate stably will receive 0 points.  |
| 11 | Usability of facility operation  | 5 | The level of facility automation shall be high; the operations shall be simple, convenient and easy to control. A technology that has extremely complex operations and is difficult to be controlled will receive 0 points.  |
| 12 | Market demand and prospect  | 7 | The market demand of the technology shall be high, and it shall have a good market prospect for its application. It is a technology much needed currently by the market. A technology that has no market prospect for its application will receive 0 points. |
| 13 | Promotion of technology | 9 | The technology has been well promoted and widely used, and its owner has effective promotion strategy and decent promotion capabilities. A technology that cannot be promoted effectively will receive 0 points. |
| 14 | Comprehensive strength of the supporting institution  | 7 | Supporting (owner) institution shall be a medium to large company, a listed company, or with well-rounded strengths in R&D, marketing, manufacturing, engineering and internal management. An institution that has no such basic strengths will receive 0 points. |
|  | Total points | 100 | Each expert will rate a given technology by adding up points from all indicators. A technology’s final score will be an average of the total scores from all experts. A ranking of all technologies will then be done based on the final averaged scores. |

**Evaluation Criteria for**

**Water Pollution Prevention and Control Technology**

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| **No.** | **Indicator** | **Maximum****Points** | **Marking criteria** |
| 1 | Rationality of technological process | 5 | The process shall be short and complete, with high optimization of component integration, and the process design shall be reasonable. Unreasonable processes will receive 0 points. |
| 2 | Applicability and effectiveness of technology  | 5 | The technology shall be suitable for the treatment of industry-specific pollution and can effectively remove characteristic pollutants. Inapplicable technologies will receive 0 points. |
| 3 | Innovation and progressiveness of technology | 15 | The technology shall be technologically innovative partly or as a whole, with its innovations reaching an internationally advanced level. Out-dated or obsolete technologies will receive 0 points. |
| 4 | Effect on reducing pollutant emission  | 8 | The technology shall have fair effects on removing characteristic pollutants and can meet the related standards steadily. Its total removal amount shall be higher than that of similar technologies. A technology without obvious effects will receive 0 points. |
| 5 | Effect on controlling secondary pollutions  | 5 | In the process of pollution treatment, there shall be no transfer or diffusion of potential pollutants caused by the phase change or addition of substances. A technology that causes secondary pollution will receive 0 points. |
| 6 | Effect on solving industry-specific pollution | 6 | It can completely solve critical issues of an industry-specific pollution as a whole, and play a key role in industry-specific pollution treatment. A technology with poor effect will receive 0 points. |
| 7 | Maturity and practicality of technology | 10 | The technology has good industrialization level of its technological achievements with extensive engineering applications, and its practicability has been proved through engineering practices. A technology without practical engineering applications will receive 0 points. |
| 8 | Economic feasibility | 8 | On a comparable basis, its overall unit construction cost and operating cost (expenses) shall be relatively low, and its application shall be economically feasible. A technology that severely deviates from average market cost will receive 0 points. |
| 9 | Energy and resource conservation  | 5 | Less construction space shall be occupied for the technology application, and less resources and energy shall be consumed during the facility operation. During the process of pollution treatment, the recycling or reuse of resources and energy can be realized. A technology that is incapable of energy and resource conservation will receive 0 points.  |
| 10 | Stability of facility operation | 5 | The facility shall be in stable working operation, and shall be able to realize given parameters with minimal instability and failures. A technology that fails to operate stably will receive 0 points.  |
| 11 | Usability of facility operation  | 5 | The level of facility automation shall be high; the operations shall be simple, convenient and easy to control. A technology that has extremely complex operations and is difficult to be controlled will receive 0 points.  |
| 12 | Market demand and prospect  | 7 | The market demand of the technology shall be high, and it shall have a good market prospect for its application. It is a technology much needed currently by the market. A technology that has no market prospect for its application will receive 0 points. |
| 13 | Promotion of technology | 9 | The technology has been well promoted and widely used, and its owner has effective promotion strategy and decent promotion capabilities. A technology that cannot be promoted effectively will receive 0 points. |
| 14 | Comprehensive strength of the supporting institution  | 7 | Supporting (owner) institution shall be a medium to large company, a listed company, or with well-rounded strengths in R&D, marketing, manufacturing, engineering and internal management. The institution that has no such basic strengths will receive 0 points. |
|  | Total points | 100 | Each expert will rate a given technology by adding up points from all indicators. A technology’s final score will be an average of the total scores from all experts. A ranking of all technologies will then be done based on the final averaged scores. |

**Evaluation Criteria for Soil (Including Solid Waste) Pollution Prevention and Control Technology**

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| **No.** | **Indicator** | **Maximum****Points** | **Marking criteria** |
| 1 | Innovation and progressiveness of technology | 15 | The technology shall be technologically innovative partly or as a whole, with its innovations reaching an internationally advanced level. Out-dated or obsolete technologies will receive 0 points. |
| 2 | Maturity of technology | 8 | The technology has good industrialization level of its technological achievements with extensive engineering applications, and its practicability has been proved through engineering practices. A technology without practical engineering applications will receive 0 points. |
| 3 | Stability of facility operation | 5 | The facility shall be in stable working operation, and shall be able to realize given parameters with minimal instability and failures. A technology that fails to operate stably will receive 0 points.  |
| 4 | Usability of facility operation  | 5 | The level of facility automation shall be high; the operations shall be simple, convenient and easy to control. A technology that has extremely complex operations and is difficult to be controlled will receive 0 points.  |
| 5 | Effect on solving industry-specific pollution | 5 | It can completely solve critical issues of an industry-specific pollution as a whole, and play a key role in industry-specific pollution treatment. A technology with poor effect will receive 0 points. |
| 6 | Treatment effect | 9 | The technology shall have fair effects on removing characteristic pollutants. Its total removal amount shall be higher than that of similar technologies. A technology without obvious effects will receive 0 points. |
| 7 | Validation of treatment effect | 9 | The effectiveness and stability standards of the treatment of characteristic pollutants shall be fully validated. A technology without validation will receive 0 points. |
| 8 | Effect on controlling residual risks/secondary pollutions | 7 | In the process of pollution treatment, there shall be no transfer or diffusion of potential pollutants caused by the phase change or addition of substances. A technology that causes residual risks or secondary pollution will receive 0 points. |
| 9 | Economic feasibility | 8 | On a comparable basis, its overall unit construction cost and operating cost (expense) shall be relatively low, and its application shall be economically feasible. A technology that severely deviates from average market cost will receive 0 points. |
| 10 | Energy and resource conservation  | 4 | Less construction space shall be occupied for the technology application, and less resources and energy shall be consumed during the facility operation. During the process of pollution treatment, the recycling or reuse of resources and energy can be realized. A technology that is incapable of energy and resource conservation will receive 0 points.  |
| 11 | User acceptance | 5 | The treatment technology shall be accepted by users and obtain positive evaluation from more than 3 users. A technology without user evaluation will receive 0 points. |
| 12 | Public acceptance | 5 | The treatment process and effectiveness shall be recognized by the public. A technology that is strongly opposed by the public will receive 0 points. |
| 13 | Market demand | 5 | The market demand of the technology shall be high, and it shall have a good market prospect for its application. It is a technology much needed currently by the market. A technology that has no market prospect for its application will receive 0 points. |
| 14 | Promotion of technology | 5 | The technology has been well promoted and widely used, and its owner has effective promotion strategy and decent promotion capabilities. A technology that cannot be promoted effectively will receive 0 points. |
| 15 | Comprehensive strength of the supporting institution  | 5 | Supporting (owner) institution shall be a medium to large company, a listed company, or with well-rounded strengths in R&D, marketing, manufacturing, engineering and internal management. An institution that has no such basic strengths will receive 0 points. |
|  | Total points | 100 | Each expert will rate a given technology by adding up points from all indicators. A technology’s final score will be an average of the total scores from all experts. A ranking of all technologies will then be done based on the final averaged scores. |

**Evaluation Criteria for Environmental Monitoring Technology**

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| **No.** | **Indicator** | **Maximum****Points** | **Marking criteria** |
| 1 | Rationality of technological process | 7 | The process shall be short and complete, with high optimization of component integration, and the process design shall be reasonable. Unreasonable processes will receive 0 points. |
| 2 | Applicability and effectiveness of technology  | 7 | The technology shall be suitable for the monitoring of industry-specific pollution and can effectively monitor characteristic pollutants. Inapplicable technologies will receive 0 points. |
| 3 | Innovation and progressiveness of technology | 15 | The technology shall be technologically innovative partly or as a whole, with its innovations reaching an internationally advanced level. Out-dated or obsolete technologies will receive 0 points. |
| 4 | Reliability of monitoring technology(equipment) | 7 | The technology shall have fair effects on monitoring characteristic pollutants and can meet the related standards continuously and steadily. It is more reliable than similar technologies (equipment). A technology that cannot meet the related standards continuously and steadily will receive 0 points. |
| 5 | Solution to major technological issues in this field  | 10 | It can solve major technological issues in this field as a whole, and play a key role in the progress of monitoring technologies in this field. A technology that cannot solve major technological issues will receive 0 points. |
| 6 | Maturity and practicality of technology | 9 | The technology has good industrialization level of its technological achievements with extensive engineering applications, and its practicability has been proved through engineering practices. A technology without practical engineering applications will receive 0 points. |
| 7 | Economic feasibility | 9 | On a comparable basis, its overall unit construction cost and operating cost (expense) shall be relatively low, and its application shall be economically feasible. A technology that severely deviates from average market cost will receive 0 points. |
| 8 | Stability of facility operation | 7 | The facility shall be in stable working operation, and shall be able to realize given parameters with minimal instability and failures. A technology that fails to operate stably will receive 0 points.  |
| 9 | Usability of facility operation  | 7 | The level of facility automation shall be high; the operations shall be simple, convenient and easy to control. A technology that has extremely complex operations and is difficult to be controlled will receive 0 points.  |
| 10 | Market demand and prospect  | 6 | The market demand of the technology shall be high, and it shall have a good market prospect for its application. It is a technology much needed currently by the market. A technology that has no market prospect for its application will receive 0 points. |
| 11 | Market promotion capability of the product | 6 | The technology has been well promoted and widely used, and its owner has effective promotion strategy and decent promotion capabilities. A technology that cannot be promoted effectively will receive 0 points. |
| 12 | Comprehensive strength of the supporting institution  | 10 | Supporting (owner) institution shall be a medium to large company, a listed company, or with well-rounded strengths in R&D, marketing, manufacturing, engineering and internal management. An institution that has no such basic strengths will receive 0 points. |
|  | Total points | 100 | Each expert will rate a given technology by adding up points from all indicators. A technology’s final score will be an average of the total scores from all experts. A ranking of all technologies will then be done based on the final averaged scores. |