



International Smart Grid Action Network

AWARD OF EXCELLENCE

2018

Awards Competition Official Rules

("Official Rules")

In partnership with the



June 2017

International Smart Grid Action Network
Organized as the Implementing Agreement for a
Co-operative Programme on Smart Grids (ISGAN)

Award Competition Official Rules

Award of Excellence

2018

Award Overview

The International Smart Grid Action Network (ISGAN) launched the Award of Excellence competition (“Competition”) to recognize excellence in smart grid projects, policies and programs around the world. ISGAN brings together 24 countries from across five continents and the European Commission to advance the development and deployment of smarter, cleaner, and more flexible electricity grids around the world. The ISGAN Award of Excellence seeks to leverage leadership and innovation in smart grids to accelerate global exchange of best practice and promote replication or adaptation of proven concepts in other markets, countries, and regions. By providing a showcase for exemplars in the global smart grid community, the Award also draws attention to the value offered by smart grid systems.

Each round of the ISGAN Award of Excellence competition is focused on a theme that highlights one or more critical aspects for power systems. The theme for this Award of Excellence competition is “Smart Grids for Flexibility.” In this context, *smart grids* refer to a range of advanced information, sensing, communications, control, and energy technologies that, taken together, support a modern power system that intelligently integrates the actions of all connected users – from power generators to electricity consumers to those that both produce and consume electricity (“prosumers”) – to efficiently deliver sustainable, cost-effective and secure electricity supplies.¹ *Flexibility* refers to the capacity of a power system to adapt to shifts in electricity generation (supply side) and consumption (demand side), regardless of cause, speed, or magnitude, to balance between

¹ Adapted from European Technology Platform Smart Grid (ETPSG).

supply and demand in a reliable, cost-effective manner.² Entities engaged in smart grids (or grid modernization) projects that exhibit excellence in improving grid flexibility, broadly defined, are encouraged to apply.

Winning projects will be recognized during a ceremony targeted for 2018 at the annual Clean Energy Ministerial (CEM), and also in ISGAN programs and proceedings. Winners will be granted a limited individual license to advertise and promote the award granted to the project and a limited right to use and refer to ISGAN Award of Excellence mark (i.e., the logo) and the phrase “ISGAN Award of Excellence Winner”, subject to the Official Rules for this Competition and any guidelines published by the Awards Administrator (the “Administrator”).

About ISGAN

The International Smart Grid Action Network (ISGAN) was launched at the 2010 Clean Energy Ministerial in Washington D.C., USA, and formally organized under the Implementing Agreement for a Co-operative Programme on Smart Grids (ISGAN) in 2011 under a framework of the International Energy Agency (IEA). ISGAN’s mission is to accelerate progress on key aspects of smart grid policy, technology, and related standards. ISGAN pursues its mission through voluntary participation by governments and affiliated institutions in specific projects and programs. ISGAN’s activities support development of a better global understanding of the value that smarter electricity systems can bring, address gaps in related knowledge and tools, and create opportunities for more peer-to-peer learning and engagement. As part of its mission, ISGAN has established the annual Award of Excellence to recognize excellence in smart grid projects, policies, and programs. More information on ISGAN can be found at www.iea-isgan.org.

About GSGF

ISGAN is implementing the Award of Excellence competition in partnership with the Global Smart Grid Federation (GSGF) and its Best Smartgrids Project Award. Established in 2010, the GSGF links leading national and regional smart grid organizations from around the world, each representing a variety of private sector, academic, and other stakeholder interests. GSGF works to accelerate the deployment of smart grids by facilitating sharing of best practices on resolutions around barriers to deployment, consumer engagement, innovation, and capacity building. More information on GSGF can be found at www.globalsmartgridfederation.org.

² Adapted from description in “The Power of Transformation - Wind, Sun and the Economics of Flexible Power Systems,” International Energy Agency (IEA), 2014. Available at www.iea.org; see p. 23.

Description of Award Theme

ISGAN strives to draw attention to key aspects of truly “smart” grids, including:

- **Flexibility:** cost-effectively fulfilling customers’ needs by being able to adapt quickly and dynamically to changing generation profiles, network status, consumer demands, and outside factors (e.g., weather) through intelligent integration of a variety of supply sources, electricity storage, demand response, and links to other energy sectors such as heat and transport;
- **Accessibility:** granting connection access for all uses and sources of electric power, including variable renewable power sources and high-efficiency, distributed energy resources;
- **Reliability:** assuring and improving security and quality of supply, consistent with the demands of the digital age, with fewer and shorter outages;
- **Resiliency:** rebounding quickly and efficiently from adverse events, natural or manmade, and anticipating future hazards and uncertainties;
- **Cost Effectiveness:** improving operating efficiencies, better utilizing existing infrastructure, delaying need for new investments in grid infrastructure, reducing network losses, and providing best economic value through innovation, efficient energy management and “level playing field” competition and regulation.

This round of the Competition focuses on the first aspect, “Flexibility,” while still taking into account the other aspect.

As noted by the IEA, “the physical nature of electricity implies that generation and consumption must be in balance instantaneously and at all times. System operation needs to ensure this, respecting the technical limitations of all system equipment under all credible operating conditions, including unexpected events, equipment failure and normal fluctuations in demand and supply.”³ More, consumers are becoming increasingly dependent upon a constant supply of electricity and, thus, are less forgiving of interruptions.

However, as more renewable energy generation and distributed energy resources are brought onto the grid, and as the market for electric vehicles and other connected devices continues to grow rapidly, the variability of both electricity supply and demand is also growing, presenting an increasingly complex power system management challenge. This increase in variability calls for greater power system flexibility in which electricity production or consumption is somehow modified to respond to both expected and

³ IEA 2014; see p. 22.

unexpected fluctuations in supply and demand. In essence, flexibility expresses the capability of a power system, measured in megawatts available for an upward or downward change, to maintain continuous service in the face of rapid and large swings in supply or demand over timescales ranging from a few minutes to several hours.⁴ As noted by the IEA, sources of flexibility include (but are not necessarily limited to) rapidly dispatchable generators, energy storage, microgrids, demand-side management or response, ancillary services (e.g., frequency and voltage regulation), grid infrastructure and advanced grid operations.⁵

It is important to recognize that flexibility can be applied at various scales. For example, in some markets, power system operators might be faced with integrating large-capacity, transmission-scale variable renewable resources, while in other markets, they may be more focused on greater numbers of smaller, more distributed generation resources. Similarly, some power system operators may have more opportunity to integrate demand response programs that utilize large end-use and industrial entities, while others might more effectively implement demand response programs on a smaller scale employing residential building resources, such as a program that focuses on shifting hot water loads and household appliance loads. A truly “flexible” grid can operate at multiple scales, for example, integrating production of electricity from large-scale variable renewable energy resources (a centralized source of supply) with electric vehicle charging (a distributed source of demand).

Smart grids systems and approaches facilitate this flexibility. Through the use of advanced sensor, communications, and control technologies and techniques, smart grids help keep supply and demand in balance and, thereby, support the delivery of cleaner, more cost-effective, and more reliable electricity services to the end user. For example, field tests have demonstrated that grid-responsive residential appliances equipped with controllers to detect under-frequency grid events can shed load from the appliances and prevent outages.⁶ Well-designed smart grid programs that employ the use of “smart” grid-responsive appliances that receive and respond to information about the outside world can both improve the flexibility of the grid as well as improve the user experience.

Smart grids achieve these flexibility improvements in various ways including (but not limited to) the following examples:

⁴ IEA 2014.

⁵ IEA 2014.

⁶ Hammerstrom et al., “Pacific Northwest GridWise Testbed Demonstration Projects. Part II. Grid Friendly Appliance Project,” Pacific Northwest National Laboratory, October 2007. Prepared for U.S. Department of Energy under Contract DE-AC05-76RL01830.

1. Smart grid technologies and approaches can help facilitate flexibility by effectively dispatching physical assets, such as energy storage systems, distributed generation, fast-ramping generation plants, and microgrids.
2. Smart grids can improve flexibility through operational improvements, such as shorter dispatch intervals (i.e., ancillary services) and the integration of improved information, weather data, and situational awareness to forecast grid behavior.
3. Smart grids can improve flexibility through improved management of demand response resources, including peak curtailment and effective coordination with thermal storage (e.g., water heaters).
4. Smart grid technologies and approaches that improve the overall grid infrastructure, including frequency and voltage control and capacity of transmission and distribution systems, can also increase flexibility, allowing operators to draw on resources from an expanded regional network and more effectively balance variability.

Considered broadly, power system flexibility can be defined from multiple perspectives. For example, one perspective could be an operations viewpoint that prioritizes the agility of the electrical network to adjust to known or unforeseen changes, for instance in load conditions or responding to sharp ramps due to errors in renewable generation forecasts. A strategic investment perspective might consider the flexibility in expansion planning to respond to new regulatory and policy changes or technological breakthroughs without incurring stranded assets or premature obsolescence. Projects that demonstrate excellence in smart grids for flexibility could come from these or other perspectives, covering a wide range of system tools and approaches that address these challenges.

Recognizing the critical importance of sustaining a flexible grid and the role that smart grids can play to help support and improve grid flexibility, ISGAN has chosen “Smart Grids for Flexibility” as the theme of the 2018 Award of Excellence.

Who Should Apply?

The focus of this Competition is to recognize one or more projects that exhibit excellence in supporting and improving grid flexibility using smart grid technologies, systems, and approaches.⁷ ISGAN is encouraging applications by entities, teams, and consortia that have implemented or are implementing projects that employ smart grids to support flexible electricity systems. An acceptable project could employ any number of smart grid devices, systems and approaches to help facilitate grid flexibility, such as (but not limited to) communications infrastructure, smart meters, demand response programs, field sensors and controls, communications and controls standards and protocols, cyber security measures that address threats to an interconnected grid, data analytics, training programs, grid management systems, and enterprise architecture applied to electric grid operations technology.

The primary purpose of the overall project does not need to be solely focused on grid flexibility; however, this topic must be a significant project element and the focus of the Competition application. Smart grids must be employed as part of the project. For instance, a project focused on the deployment of advanced metering infrastructure (AMI) could be acceptable *if and only if* it can be demonstrated that these technologies helped facilitate grid flexibility *and* the Competition application focuses on those aspects.

The Competition is not limited to large-scale, deployment-level projects. Smaller, innovative pilot projects that address critical challenges and might lead to significant impacts if implemented at scale are eligible and encouraged to apply.

Any entity or team of entities may apply, but only one entry per project will be allowed. To that end, for projects implemented by a team of entities (e.g., a consortium of companies or a partnership among government, industry and civil society), a single entity should be designated as the “Submitting Entity” and the remainder of the team listed as “Partner Entities” (collectively, “the Applicant”). Similarly, it is anticipated that the team responsible for the project, the Applicant, will be represented for purposes of communication by a single “Point of Contact” (“POC”) who is part of the Submitting Entity.

Although it is not required nor expected that the project be fully completed at the time of application to the Competition, it is expected that the project have demonstrable results, supported by evidence, to allow an expert judging panel to make a reasoned judgment about the strength of the project measured against the Evaluation Criteria described below.

⁷ A glossary of terms is provided in Appendix 1 to assist in understanding the award scope and avoid confusion in the submission and review process.

To ensure that the project results are current and relevant, only projects that were active during or after 2012 will be considered.

Although ISGAN operates under a framework of the IEA, the Competition is not restricted to activities hosted within or by IEA member nations. Applications from entities in emerging and developing economies will also be accepted and are encouraged.

Competition Period

Nominations packages (“Submissions”) for the ISGAN Award of Excellence, must be submitted by 00:00 UTC,⁸ October 13, 2017. Only those Submissions that are consistent with the Official Rules will be accepted for consideration.

How to Enter

The Submitting Entity shall assemble an Official Project Submission Form (including any relevant attachments) that provides the information described in the “Content of Submission” below. This document shall be submitted in a pdf format to the Administrator, via electronic mail at award@smartgrid.or.kr, no later than the submission deadline. The Administrator will send an email to the POC at the Submitting Entity confirming receipt of the Submission.

Optionally, the Submitting Entity may include a Submission: Supplemental Information form or similar materials, such as a Power Point presentation, as part of the Submission.

Questions regarding any aspect of the Official Rules may be submitted to the Award Administrator via e-mail at award@smartgrid.or.kr. Please include the term, “Question,” in the e-mail subject line. All questions and the responses will be posted in a timely manner on the ISGAN web site without attribution (www.iea-iskan.org).

Selection of Award Winner(s)

The Administrator will review each Submission to ensure they meet the minimum requirements as described under “Content of Submission” below. The Administrator (and/or its agents) may, at its discretion, contact the Submitting Entity (via the POC) to schedule a teleconference call or similar interaction to validate information and claims included in the Submission. Submissions that do not meet the minimum requirements will be rejected. Applicants are permitted to address the problems with rejected Submissions

⁸ UTC is Coordinated Universal Time, the standard by which much of the world coordinates clocks and time. It is a more precise measure than the more commonly known Greenwich Mean Time (GMT).

and submit them again for re-consideration at any time up to the final deadline listed above.

The Administrator will convene a qualified expert judging panel (the “Jury”) assembled by ISGAN in cooperation with the Global Smart Grid Federation. The Jury will receive the qualified Submissions from the Administrator, including any additional information obtained by the Administrator (and/or its agents) via a teleconference call or other communications with the Submitting Entity. The Jury will individually and collectively review the Submissions, judging them using the Evaluation Criteria described below, in order to select a winning Submission(s) (“Winning Project(s)”). A Submission’s likelihood of winning will depend primarily on the number and quality of all of the Submissions, as determined by the Jury using the Evaluation Criteria.

The Administrator and/or the Jury may, at their discretion, utilize the Administrator (and/or its agents) to contact the Submitting Entity (via the POC) to clarify information or to obtain additional information as needed for the Jury to make a reasoned judgment on the strength of the project measured against the Evaluation Criteria described below.

Upon the conclusion of its review, the Jury will provide the Administrator with the results, identifying the Winning Project(s).

Each individual member of the Jury has the right to withdraw without advance notice in the event of circumstances beyond his/her control. Each individual member of the Jury must notify the Administrator in writing if he/she has any substantial prior knowledge of, or contact or involvement with, any of the Submissions provided to him/her for review and recuse him/herself from the review, evaluation and discussion in which he/she (A) has a personal or substantial financial interest, or is an employee, officer, director, or agent of any entity that is a Submitting Entity or Partner Entity; or (B) has a familial or financial relationship with an individual who is an employee, officer, director, or agent of any entity that is a Submitting Entity or Partner Entity. The Administrator will work with the Jury to prevent any and all conflicts of interest or the appearance thereof.

Evaluation Criteria

Submissions will be assessed according to the following criteria, which will be equally weighted in the Jury’s evaluation.

PRIMARY CRITERIA

- **Potential impact** (25 points) - The potential impact of the project, including its approach, design, implementation, and similar elements, in particular related to the

influence of smart grids on improvements to flexibility (where possible, measured in terms of megawatts available for changes in an upward or downward direction⁹) as well as the magnitude of realized socio-economic benefits (e.g., number of people affected by improvements, level of improvement to underserved populations, etc.).

- **Economic rationale** (25 points) - The degree to which the project, or the concepts underlying the project, exhibit strong evidence of direct or indirect economic benefits such as (but not limited to) a compelling business case, avoided economic losses, or expansion of value-added services, whether the targeted stakeholders for the project are end-user customers (residential, industrial, commercial), the utility, the distribution system operator, network owners, energy traders, generators, or others.
- **Potential for replication or adaptation** (25 points) - The degree and ease with which the project attributes can be replicated, adapted or scaled to other markets, environments, and/or countries to improve grid flexibility with smart grids, taking into account key attributes such as the costs of implementation and regulatory considerations.

SECONDARY CRITERIA

- **Innovation** (12.5 points) - The degree to which one or more major project elements is new, novel, and potentially highly effective or transformative.
- **Other benefits** (12.5 points) -- The degree to which smart grid technologies, systems, and approaches add value and produce non-economic benefits, directly or indirectly, across one or more other dimensions not considered in the criteria above including (but not limited to) social, environmental, safety, and community factors.

⁹ Please note that, though this measure is preferred, it is not required.

Content of Submission

Each Submission shall contain the following information, using the Official Project Submission Form template available for download at <http://www.iea-isgan.org/award2018>.

1. Title of the project;
2. Brief Project Description, describing the project, such as the principal objectives (related to consumer engagement and empowerment), scope, key implementation attributes, and key outcomes, as well as how the project relates to the theme, “Smart Grids for Flexibility.”
3. Background and Implementation, describing the context for the project as well as the project’s purpose, approach, and conduct related smart grids for flexible electricity service.
4. Project Outcomes, describing the outcomes of the project, and how the project attributes and outcomes exhibit excellence when measured against the evaluation criteria, supported whenever possible by relevant metrics or other performance indicators.
5. Submitting Entity's information with organizational name, organizational URL, mailing address, and contact information (mailing address, phone, e-mail address) for the POC
6. Acceptance of Provisions, either by signing the statement in the Official Project Submission Form template or by including a signed cover letter acknowledging consent to submission of the project and agreement to all the provisions of the Official Rules, and noting that acceptance of the Official Rules is required for the Submission to be considered; and,
7. (if applicable) Partner Entities' information including their names, associated organizational URL, mailing address, and contact information (mailing address, phone, e-mail address) for the representative point of contact for each partner (one of whom should be identified as the secondary point of contact for the Applicant.).
8. (if applicable) Acceptance of Provisions by Partner Entities, either by having a representative of each Partner Entity sign the statement in the Official Project Submission Form template or by including a letter from each Partner Entity delegating

its representation to the Submitting Entity.¹⁰ Inclusion of this letter also signifies acceptance of all provisions in the Official Rules.

The Submission must focus on the substance of how the smart grid project facilitates grid flexibility, regardless of the overall objective of the project. The project detailed in the Submission must have been active during or after 2012. Only one Submission per project is permitted.

As noted above, the project described in the Submission, and how the smart grids facilitate a more flexible grid, should have demonstrable results, supported by evidence, to allow the Jury to make a reasoned judgment about the strength of the project measured against the Evaluation Criteria. In preparing the Official Project Submission Form, Applicants might consider the aspects mentioned in the discussion below of optional supplemental information.

English must be used for provision of information in the Official Project Submission Form.

To support the claims and assertions in the Official Project Submission Form, Applicants may optionally include attachments, such as promotional materials, Power Point presentations or official documents, URL links to relevant websites, such as project websites and news articles, and/or written supplemental information (i.e., additional project narrative). If such attachments, links and/or written supplemental information are included, Applicants shall complete the applicable sections of the Submission: Supplemental Information form available at <http://www.iea-isgan.org/award2018>.

Attachments and linked information, such as URL sites, can be in a language other than English, although a brief summary of that material in English is required for it to be considered. English must be used for provision of written information in the Submission: Supplemental Information form.

Topics that Applicants might address in the required Official Project Submission Form and any attachments, URL links, or written supplemental information include the following:

A. Background

- a) Describe the past experience/history that affects design and implementation;
- b) Describe the rationale for embarking on the project;

¹⁰ A single letter identifying all the Participating Entities and having co-signature of representatives of each of the Participating Entities is acceptable.

- c) Describe the principal desired changes from past/current practices;
- d) Describe the necessary features, constraints, requirements associated with design and implementation;
- e) Provide the most important/critical factors that shape the project; and,
- f) Describe the role of stakeholders (i.e., persons, groups or organizations with an interest, real or potential, in the project) in development of the project.

B. Purpose

- a) Describe the key outcomes desired for the overall project;
- b) Describe the key outcomes desired for the smart grid devices, systems or approaches, which enable grid flexibility (*if the primary focus of the project is different*);
- c) Describe how and why achievement of these outcomes will impact the service of providing electricity in the future and improve consumer value and benefits; and
- d) Describe the metrics of success (i.e., how will you know if you have been successful).

C. Approach

- a) Describe the approach to planning the project, including the rationale for determining the size of the project (e.g., number or percentage of consumers participating);
- b) Describe the approach to implementation of the project;
- c) Describe the principal elements (activities/tasks) of the project (including those associated with planning and implementation);
- d) Describe the methods and metrics of evaluation and how these metrics influence the implementation of the project; and
- e) Describe the schedule associated with key activities/tasks.

D. Project Conduct and Outcomes

- a) Describe the conduct of the project in practice (e.g., what went as expected, what did not, and what was surprising);

- b) Describe the known outcomes at the time of Submission, as measured against the metrics used;
- c) Describe the projected, future outcomes and impacts, as measured against the metrics used;
- d) Describe stakeholder reactions to the project; and,
- e) Provide other detailed project information, using project attributes relevant to the Competition theme.

Where possible, provide factual evidence for claims and assertions regarding relevant project information (or make such evidence accessible via, for example, citations or independent references, or URL for web access).

As noted above, the Administrator and/or the Jury may, at their discretion, utilize the Administrator (and/or its agents) to contact the Submitting Entity (via the POC) to clarify information provided in the Official Project Submission Form or the supplemental information or to obtain additional information as needed for the Jury to make a reasoned judgment on the strength of the project measured against the Evaluation Criteria.

Award Use and Restrictions

Applicant and Winner acknowledge that the ISGAN Award of Excellence mark and all other intellectual property regarding the Competition (collectively the “ISGAN IP” including associated “Branding Materials”) are owned by the Administrator. In this context “Winner” includes all members identified on a winning Submission as participants in that project. Applicant and Winner agree not to challenge or seek to register any intellectual property associated with the Competition. Winner will be granted a limited individual license to the ISGAN IP to advertise and promote the award granted to the project which was submitted for review from the date of award. All use of the ISGAN IP must be in compliance with the guidelines published by the Administrator, as updated and posted on the ISGAN website (www.iea-isgan.org/award2018), and as attached to these Official Rules and incorporated by reference. Winner agrees not to use the ISGAN IP or make any mention of winning an award that is not consistent with these guidelines, and to immediately cease all inconsistent use upon notice by the Administrator. Winner may only promote that an award pertains to a specific project which was the subject of the award, and may not state or imply that the award applies to any other projects in which the Submitting Entity (or team members thereof, e.g. “Partner Entities”) participates. Winner may not use the ISGAN IP to state or imply that the Administrator or any other entity or person associated with the

Competition endorse or are affiliated with the Winner or any other projects in which the Winner participated.

Award Ceremony and Publicity

This ISGAN Award of Excellence is targeted to be awarded during a formal ceremony at the Clean Energy Ministerial (CEM) in 2018. A press release will be prepared for each Award. ISGAN reserves the right to change the date and location of the award ceremony, as circumstances require.

Subsequent to the award ceremony, Winner may utilize Branding Materials associated with the award (e.g. the logo and summary description) provided that the year of the award and linkage to the specific project is always apparent. Any use of the ISGAN Award of Excellence mark (i.e., the award logo) will be accompanied by the name of the project for which the award was received, as an integral part of the image, unless authorized in writing in advance by the Administrator. Utilization of Branding Materials is subject to other provisions in the Official Rules.

Except where and as may be prohibited by law, participation in the Competition constitutes express permission of an Applicant for the Administrator (and those acting pursuant to the authority of the Administrator) to use each Applicant's name and the fact-of-application for the Competition in advertising, trade, and publicity purposed for the ISGAN program and the Competition in all forms of media now known or hereafter discovered or devised, worldwide, in perpetuity, without further notice, review or approval, or compensation.

General Conditions

By participating in the Competition, each Applicant fully and unconditionally agrees to and accepts these Official Rules and the decisions of the Administrator, which are final and binding in all respects. By participating in the Competition, each Applicant waives any right to claim ambiguity in these Official Rules. An Applicant is not Winner until it has fully complied with these Official Rules and been formally notified by the Administrator that they have been selected as Winner. The Administrator reserves the right, in its sole and absolute discretion, to cancel, terminate, modify, extend or suspend the Competition, (in whole or in part) should non-authorized intervention, fraud, or other causes corrupt or affect the administration, security fairness, or proper conduct of the Competition. In such case, the Administrator may grant awards from all eligible applications received for the Competition prior to and/or after (if appropriate) the action taken by the Administrator or via some other means determined by the Administrator in its sole and absolute discretion to be fair, appropriate and consistent with these Official Rules. The Administrator reserves

the right to disqualify any Applicant it determines, in its sole and absolute discretion, is or is attempting or intending to:

- (a) tamper with any aspect of the operation of the Competition,
- (b) defraud the Competition,
- (c) undermine the legitimate operation of the Competition by cheating, deception, or other unfair practices,
- (d) annoy, abuse, threaten, or harass any other participants, the Administrator, any representatives of ISGAN, or any Participant of ISGAN, or
- (e) act in violation of these Official Rules.

In such event, the Administrator reserves the right (in addition to disqualification of such Applicant) to seek damages from any such Applicant to the fullest extent permitted by law. The Administrator's failure to enforce any provision of these Official Rules shall not constitute a waiver of that provision. Any entity that enters the Competition through means not permitted by these Official Rules is subject to disqualification. The Administrator is not required to respond to questions about the Competition.

General Release and Waiver of Claims

By entering this Competition, each Applicant hereby releases the Administrator, ISGAN, its participants and all of their respective parents, subsidiaries, affiliates, advertising agencies, and all of their respective directors, officers, governors, employees, shareholders, and agents (collectively, the "Releasees") from:

- (a) any and all liability, loss, harm, damage, cost, expense, or claims, including third party claims based on publicity and/or privacy rights, defamation, and intellectual property associated with the Applicant or Winner's participation in this Competition, and any award associated with this Competition, and/or use or misuse of any award in connection with the Competition, including, but not limited to, all reasonable counsel fees and court costs incurred
- (b) anything related to the Competition, or execution of this Competition (or participation therein), including preemption, cancellation, or rescheduling; and
- (c) anything that may occur in connection with acceptance and/or use of the award or while participating in the Competition, even if caused or contributed to by the negligence of the Releasees.

Limitation and Liability

Neither the Administrator, nor any other Releasee, is responsible for lost, late, incomplete, stolen, misdirected, illegible, erroneous or incomplete applications. Neither the Administrator, nor any other Releasee is responsible for any incorrect or inaccurate information, whether caused by an Applicant tampering, or by any of the equipment or programming associated with or utilized in the Competition, and neither the Administrator nor any Releasee assumes responsibility for any error, omission, defect, theft, destruction, or unauthorized access to the materials related to the Competition, or for any damage to any computer related to, or resulting from, participating in the Competition. No responsibility is assumed by the Administrator for lost, mutilated, incomplete, illegible, stolen, misdirected, erroneous or delayed entries or e-mail; or for any computer, telephone, cable, satellite, network, electronic or on-line/Internet hardware or software malfunctions, failures, connections, or availability, or garbled or jumbled transmissions, or service provider/Internet/website use, accessibility or availability, or traffic congestion, or unauthorized human intervention, other errors of any kind, including without limitation, testing results, whether human, mechanical, electronic or network, or the incorrect or inaccurate capture of entry or other information or the failure to capture, or loss of, any such information. Any use of the robotic, macro, automatic, programmed or like entry methods will void all such entries by such methods. No responsibility is assumed by the Administrator for any incorrect or inaccurate information, whether caused by Applicants, website users, testing or evaluating individuals or organizations, tampering hacking, product testing or by any of the equipment or programming associated with or utilized in the Competition; and none of the Releasees assume any responsibility for any error, omission, interruption, deletion, defect or delay in the operation of the Competition. IN NO EVENT WILL THE ADMINISTRATOR OR ANY RELEASEE BE RESPONSIBLE OR LIABLE FOR ANY INJURIES, CLAIMS, ACTIONS, DAMAGES, LOSSES, OR LIABILITY OF ANY KIND, INCLUDING DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES RESULTING FROM OR ARISING FROM PARTICIPATION IN, OR THE PRODUCTION, COMPETITION, OR ADMINISTRATION OF THE COMPETITION, OR ACCEPTANCE, POSSESSION, USE, MISUSE, OR NONUSE OF AN AWARD. WITHOUT LIMITING THE FOREGOING, ALL AWARDS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. ANY ATTEMPT BY AN APPLICANT OR ANY OTHER INDIVIDUAL OR ORGANIZATION TO DELIBERATELY UNDERMINE THE LEGITIMATE OPERATION OF THE CONTEST IS A VIOLATION OF CRIMINAL AND CIVIL LAWS, AND SHOULD ANY SUCH

ATTEMPT BE MADE, THE ADMINISTRATOR RESERVES THE RIGHT TO SEEK DAMAGES FROM ANY SUCH PERSON OR ENTITY TO THE FULLEST EXTENT PERMITTED BY LAW.

Choice of Law

All Republic of Korea national, provincial and local laws and regulations apply to the Competition, regardless of the nationals or origins of Applicant. Applicant agrees that:

- (a) any and all disputes, claims, and causes of action arising out of or connected with this Competition, or any award, or the determination of the Winners, shall be resolved individually, without resort to any form of class action;
- (b) any and all claims, judgments, and awards shall be limited to actual out-of-pocket costs incurred, including costs associated with entering this Competition but in no event attorney's fees.

All Applicants acknowledge and agree that the Competition shall be administered solely and exclusively in the Republic of Korea, and that all issues and questions concerning the construction, validity, interpretation, and enforceability of these Official Rules, or the rights and obligations of Applicant and/or Administrator in connection with the Competition, shall be governed by, and construed solely and exclusively in accordance with, the laws of Republic of Korea, without regard to conflicts of law/choice of law doctrine or any other jurisdiction, and all proceedings shall exclusively take place in the courts of the Republic of Korea. Applicant agrees to the exclusive jurisdiction of such court and waives any right to change of venue or any like right.

Copy of Official Rules

Official Rules may be obtained by visiting the website of the Administrator at <http://www.iea-isgan.org/award2018> during the Competition period.

Copy of Winning Project's List

For a list of the Winning Projects, visit the website of the Administrator located at www.iea-isgan.org.

Administrator: Korea Smart Grid Institute, 18F Korea Technology Center, 305 Teheran-ro, Gangnam-gu, Seoul, 135-513, Korea

Appendix 1 – Glossary of Terms

Appendix 2 – Guidelines for Use of Intellectual Property

Appendix 1

International Smart Grid Action Network Award of Excellence Glossary of Terms

Administrator (also called Award Administrator or the ISGAN Award Administrator)– The Korea Smart Grid Institute, in its role as co-Secretariat for the Implementing Agreement for a Co-operative Programme on Smart Grids (ISGAN).

AMI – Advanced metering infrastructure

Applicant – The Submitting Entity and Partner Entities, considered collectively.

Attribute – An important feature of successful smart grid projects

Attribute Class – A collection of project attributes having a common organizing principle

Branding Materials –Generally, visual imagery and public relations descriptions and phrases; specifically as referenced in Appendix 2 Guidelines for Use of Intellectual Property

Competition – The process associated with the submittal, review and award of the ISGAN Award of Excellence, and as specifically employed in Appendix 2, Guidelines for Use of Intellectual Property

Demonstration-level project – A project whose intent is to establish confidence in the viability and merit of deployment of a new technology, system, product or service at a scale relevant for wide-scale adoption.

Deployment-level project – A project that embodies all the features and functionality for broad dissemination without further scale-up or adaptation.

Flexibility – In general, the capacity of a power system to adapt to shifts in electricity generation (supply side) and consumption (demand side), regardless of cause, speed, or magnitude, to balance between supply and demand in a reliable, cost-effective manner. Note that the specific definition of flexibility can vary by country, electricity market, organization or other entity or jurisdiction.

IEA – International Energy Agency

IP – Intellectual Property, specifically as identified in Appendix 2 Guidelines for Use of Intellectual Property

ISGAN – the Implementing Agreement for a Co-operative Programme on Smart Grids (ISGAN), more commonly known as the International Smart Grid Action Network

ISGAN Operating Agent (or Operating Agent) – The entity, organization, or individual empowered to act for and on behalf of the Participants in the Implementing Agreement for a Co-operative Programme on Smart Grids (ISGAN), currently the Austrian Institute of Technology.

Jury – A qualified expert review panel convened to evaluate the Submissions according to the criteria listed in the Official Rules and, from this evaluation, to select one or more of said Submissions as winners of the ISGAN Award of Excellence.

Participating Entity – An organization, company or individual that was a principal contributor to the project being submitted for the ISGAN Award of Excellence. There may be multiple Participating Entities included in any one Submission. All Participating Entities, by their acknowledgment in the Submission, accept all provisions in the Official Rules.

Partner Entity – a Participating Entity that is not the Submitting Entity, as identified in the Submission.

Phrase – “ISGAN Award of Excellence Winner”, as specifically referenced in Appendix 2, Guidelines for Use of Intellectual Property.

Pilot-level project – A project whose intent is to explore the operational effectiveness, viability and merit of a new technology, system, product or service, at a scale that if successful enables direct scale-up to configurations appropriate for broad deployment.

POC – Point of Contact – The designated representative of the Submitting Entity, including all contact information.

Rules (or Official Rules) – ISGAN Award of Excellence, Awards Competition Official Rules

Service Providers – Entities that are responsible for providing electric supply and/or related services (could range from power quality, metering, appliances, appliance control, to billing services) to consumers.

Smart Grid – In general, a modernized electrical grid that uses analogue or digital information and communications technology, sensors, and control systems to gather and act on information, such as information about the behaviours of suppliers and consumers, in an automated fashion to improve the efficiency, reliability, economics, and sustainability of the production and distribution of electricity. Note that the specific definition of a smart grid can vary by country, electricity market, or other jurisdiction.

Submission – The collective information submitted for review as a candidate to win the ISGAN Award of Excellence (also referred to as the nomination or the nominations package). This must include the Official Project Submission Form for the Submission to be considered.

Submitting Entity – The organization, company, or individual that is serving as the principal agent in representing an Applicant and Submission for the ISGAN Award of Excellence, including all Participating Entities listed on the submittal. If the Submitting Entity is not a Participating Entity, it must identify such in the Submission.

UTC – Coordinated Universal Time

Winner – A Participating Entity identified on a winning Submission as selected by the Jury, granted with a limited individual license to the ISGAN IP to advertise and promote the award granted to the project which was submitted for review, from the date of award.

Winning Project – The project corresponding to a Submission selected by the Jury, following evaluation according to the criteria in the Official Rules, for receipt of the ISGAN Award of Excellence.

Appendix 2

International Smart Grid Action Network Guidelines for Use of Intellectual Property

(1) Use of ISGAN Marks and References to the Competition.

Subject to the Official Rules for the ISGAN Award of Excellence Awards Competition (the "Competition"), and using the same capitalized terms as used in the Official Rules unless indicated herein to the contrary, pursuant to these policies and guidelines ("Guidelines"), each Winner shall have a non-exclusive, non-transferrable, restricted, revocable limited right to use and refer to the phrase "**ISGAN Award of Excellence Winner**" (the "Phrase"), solely in a factual manner or context, and solely in connection with materials or activities specifically related to the particular winning project (the "Winning Project") that:

- (a) have been previously reviewed and approved by the Award Administrator in the first instance; and
- (b) must comply with the Guidelines at all times.

Once the use of the Phrase and ISGAN name in materials or activities has been approved by the Award Administrator, subsequent materials or activities that do not alter or modify the use of the Phrase or ISGAN name need not be submitted for approval. Except upon the prior written consent of the Award Administrator in each instance, the Phrase and ISGAN name must only be used in association with the Winning Project as submitted in the Competition. For the avoidance of doubt, the Phrase and ISGAN name may not be used in any way or for any purposes whatsoever in connection or association with other non-Winning projects that may be considered alternatives or derivatives of the Winning Project.

Any use or reference of the Phrase or to the ISGAN name beyond use in a factual manner or context (for example, packaging, advertising, marketing materials and/or the Competition entry's website for the Winning Project), shall require the winner to:

- (a) obtain written permission from the Award Administrator prior to its use or distribution, including where such approval is contingent on strict adherence to the Guidelines.
- (b) maintain the quality controls and abide by the minimum standards of quality control provided in the Guidelines.

(c) execute such further documents, assignments, agreements, and instruments and take any further acts as the Award Administrator may deem necessary and reasonably request in order to effectuate these terms.

ISGAN will retain all rights, including intellectual property rights, associated with the Phrase (and any variants) and the ISGAN name and reserves the right to monitor and/or police the use of the Phrase or any other reference to ISGAN names, marks or trademarks, including without limitation, on any Winning Project or other materials associated with the Winning Project.

It is understood the Guidelines may be updated and/or modified periodically in ISGAN's sole discretion, and Applicant agrees to accept and be bound by any updates and/or modifications. Applicant further agrees to abide by use or reference of the Phrase or any other ISGAN-owned names or marks in a manner expressly consistent with the minimum standard of quality controls specified and as updated and/or modified in the Official Rules and Guidelines.

(2) Intellectual Property and Publicity Rights.

The Operating Agent for the Implementing Agreement for a Co-operative Programme on Smart Grids (ISGAN) ("ISGAN Operating Agent"), is the owner of the service mark/trademark ISGAN. Applicant acknowledges the ISGAN Operating Agent's exclusive right, title and interest in and to the ISGAN name and will not, at any time, do or cause to be done any act or thing contesting or impairing such rights, titles and interests. Applicant further acknowledge that the sole right granted to a Winner under these Guidelines and the Official Rules is to use the Phrase solely and specifically in connection with those materials or activities associated with the Winning Project and that are previously approved by the ISGAN Award Administrator (in consultation with ISGAN Operating Agent) as a result of winning the Competition, and for no other purpose whatsoever. Any and all goodwill that arises from Applicant's use of the Phrase will inure to the sole benefit of ISGAN.

Applicant agrees not to challenge, oppose, petition to cancel or otherwise attack the validity of the ISGAN name or trademark and/or the ISGAN Operating Agent's ownership thereof. Applicant acknowledges that Applicant has no right, title or interest in the Phrase or the ISGAN name, and that nothing in these Guidelines or the Official Rules shall be construed as an assignment of any right, title or interest in the Phrase or the ISGAN name, except the limited right to use and refer to the Phrase as provided in this agreement and under these Guidelines.

Applicant acknowledges and agrees that the ISGAN Operating Agent has complete authority to control use of the ISGAN name or marks. Applicant shall use the Phrase in strict compliance with the provisions of the Official Rules and in conformity with the Guidelines, as amended from time to time. Should Applicant fail to comply with the Guidelines as outlined in the Appendix, or fail to maintain proper quality controls and/or act, behave and/or do anything to negatively impact the goodwill and/or the ISGAN name, the ISGAN Operating Agent shall have the right in its sole discretion to terminate the rights granted under these Official Rules or Guidelines at any time.

Applicant acknowledges and agrees that the ISGAN Operating Agent shall have the sole right and discretion to determine whether any action should be taken to terminate unauthorized use of the Phrase or the ISGAN name, or settle any proceeding brought by the ISGAN Operating Agent to terminate such unauthorized use. All proceeds from any enforcement action shall belong exclusively to the ISGAN Operating Agent.

By participating in this Competition, Applicant agrees and hereby grants the ISGAN Operating Agent permission to use statements, quotes, testimonials, photographs, designs, models, and/or any other material(s) provided by Applicant as part of the Competition entry, as well as Applicant's name, photograph, likeness, and, if applicable, the name of eligible Applicant's company and affiliation, for advertising, and/or promotional purposes, consistent with the ISGAN mission, without any additional compensation to eligible Applicant unless prohibited by law. Applicant retains ownership of the Projects' intellectual property rights in the Competition entry, subject to ISGAN's rights to reprint, display, reproduce, perform and exhibit the Competition entry for advertising and/or promotional purposes. By participating in this Competition, Applicant agrees that any materials generated by ISGAN, its agent or those acting at the direction of the agent, in reviewing and accessing the Projects is the sole property of the ISGAN Operating Agent.