البناء المستدام
Sustainable Building

MOSTADAM
ADDENDUM
2023

برنامج الإسكان
HOUSING PROGRAM

رؤية VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

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Itroduction

This document is to be used with alignment to Mostadam Manual available on the Sustainable Building official website the goal of this document is to continually highlight lessons learned annually to ensure projects streamline mostadam submissions and to do further lingual clarification of some credits, projects targeting Mostdam Certification can use Mostadam manual and use this supplement document for further clarification once needed.

General Items

1. **Project Brif** Project team shall submit Document related to the project with narrative explaining project boundaries and brief about the project .to be attached with project submission documents.
2. **(Commissioning Review and Documentation)** ICA Approval is to be provided on all technical evidence documents such as drawings, calculations, schedules, specifications, and materials.

3. **(Commissioning Review and Documentation)** The ICA must be engaged in the early design phases of the project. During both Design and Construction submissions, the (Cx) review logs are to be provided showing their review feedback and action taken by the project team to address their comments with a final status on all comments to be closed.

4. **(Narratives)** All credits must have a narrative explaining the project's team approach to comply with the credit requirement. Any credits submitted without a narrative will not be reviewed and shall be returned to the project team as a Revise and Resubmit. Further review of supporting evidence will be done only when a suitable narrative is provided.

5. **(Shading Analysis)** When performing shading calculations to demonstrate the percentage of the shaded area, the project team shall carefully consider the boundaries of the

assessment and the applicable area to be within logic and with appropriate consideration of the applicability and function of the space. The intent is to provide comfortable outdoors wherever occupants are expected to utilize the designated outdoor area.

6. **(Resubmission)** When re-submitting, only re-submit credits that have "Revise and Resubmit" status.

7. **(Submission Forms)** All tools and forms shall be comprehensively filled in and checked for consistency with the supporting documentation and calculations. Any incomplete tools/calculators/forms will result in the rejection of the submission, and a review cycle deducted.

8. **(ICA appointment)** The ICA can be part of the developer's team, PMC, or the Lead Design Consultant. However, they must not fill any other role in the project except as ICA and have the required experience. They shall report directly to the asset owner/client. The ICA cannot be part of the Design/Build/Contractor internal team but can be hired as a 3rd party that reports directly to the owner.

9. **(Project Boundaries)** A project boundary shall be defined so that it encompasses the allocated plot. It must include all land within the plot that is either impacted by or associated with the project and form part of its operations. The boundary shall not exclude parts of the project, allocated land, or the site in an unjustified manner to grant advantage in compliance with applicable credits. It shall include any

areas or systems that are fed directly by the development's systems.

10. **(Precedents)** Sustainable Building does not accept the concept of "Precedent" on credit review findings, approval, or rejection. Each project is treated on a case-by-case basis.

11. **(Submission Documents)** When submitting ensure that the folder paths do not exceed 75% of the allowable path length by Microsoft browser. Use short names for documents and for the sub-folders, including the credit sub-folder names (i.e., for example instead of "SS02- Ecological Assessment and Protection", use "SS02" if needed)

12. **(Evidence Documents)** It is often assumed that only the documents listed in the Evidence tables are required for the Assessor review. However, this is not the case, SB reserves the right to request additional information to ensure that credit compliance has been achieved. For project teams to avoid a Revise & Resubmit due to insufficient information provided, it is advised to avoid a "minimal effort" approach and provide comprehensive information for the Assessor team that demonstrates how the project meets the credit requirements as well as the processes and procedures described in the supporting guidance section of each credit.

13. **(Evidence Documents)** Ensure that all related documents are present in their related credit folders even if the same document is usable in multiple credits, a copy of the document should be present in each credit folder where it would be applicable.

14. **(Evidence Documents)** Sharing MOM as part of the project documentation/evidence is only considered as supporting document and is not sufficient by itself and must be supplemented by the evidence documents as per the Mostadam Guide. Furthermore, MOMs must be signed by NHC for them to contribute to any submission as supporting document.

15. **(Renewable Energy and offsets)** Projects may utilize offsite renewable energy generation to contribute to their related renewable energy credit. The project team would account for the percentage reduction due to Renewable Energy as follows (depending on the source of the renewable energy):

- For On-site renewable energy production and Off-site renewable energy production owned by the Mostadam project owner, the project accounts for 100% of the achieved Energy consumption reduction, to get the achieved points as per the Mostadam manual.
- In the case of Off-site renewable energy production not owned by the Mostadam project owner, the project only accounts for 75% of the achieved Energy consumption reduction, to get the achieved points as per the Mostadam manual.
- The project must achieve the minimum energy savings requirement without the use of renewable energy systems.
- Project teams may purchase Renewable Energy Credits (RECs) to contribute to the related renewable energy credits (but not the energy performance credit). The RECs shall meet the following:

- Must be purchased at the time of final submission for the project and shall be generated no more than 12 months from the date of submission.
- Must be generated from renewable energy power plants or facility, which are no more than 10 years old.
- The allowable renewable energy sources are: solar (PV and CSP), Wind, Geothermal, Hydro-energy.
- Shall be verified and certified by an independent third-party. Related certification shall be presented in the submission.
- To access the environmental advantages linked to renewable energy production, the project owner or operator needs to retire the RECs.

16. **(Mostadam AP Rating)** Sustainable Building is in the process of developing an ongoing Mostadam AP rating, this rating will be a measure of the quality, completeness, and overall structure of the submitted projects per AP (not organizations). A low rating may result in revoking the Mostadam AP certification of the professional. Further details on this will be provided soon.

17. **(Mostadam vs Local Regulations)** Where the requirements of Mostadam exceed local authority regulations and standards, then it is expected that the Mostadam requirements are to be fulfilled by the project as they satisfy and supersede the regulation.

18. **(Mostadam vs End User Requirements)** End-users are expected to be aware of and aligned with the requirements of Mostadam, and any sustainability features required by a pursued Mostadam credit (especially Keystone credits such as water and energy metering and management systems).

The requirement shall be incorporated into the project even if not required by the end-user/operator including public entity operators.

19. **(Key Stone Requirements)** No exemptions to requirements of Key Stone credits shall be entertained especially for reasons of cost or time impacts on the project. In the highly unlikely scenario that a health and safety issue or a technical impossibility for a Key Stone requirement is presented, SB will look into it on a case-by-case basis.

20. **(Exemptions/Alternate Compliance)** No exemptions or alternate compliance can be granted for any optional credits. Any credits that are not applicable to a project are not considered "automatically awarded" unless explicitly mentioned in the standard.

21. **(Mostadam Communities and associated Buildings)** Buildings that are within a Mostadam-rated community can utilize the compliance of the community with natural systems , environmental impact, infrastructure, accessibility, transportation, and outdoor thermal comfort requirements. In particular for sustainable features that are considered “site-wide”. This is only acceptable if the community compliance does not present a deviation from the building level compliance and would be assessed on a case-by-case basis. The interaction of the asset and it’s location within the community is taken into consideration. Land plots and building boundaries definitions must be approved by SB prior to the submission. The approach should be extensively

explained and detailed in the narratives in the submission. Below is a list of applicable credits that can be utilized:

Community Credit	Commercial Credit	Residential Credit
SA-01	SS-01	SS-01
SA-02	SS-01	SS-01
SA-03	SS-02	SS-02
SA-04	SS-04	SS-04
SA-05	SS-07	-
SA-06	SS-03	SS-03
CC-01	TC-03	TC-03
CC-04	TC-04	TC-05
CC-05	TC-02	TC-02
CW-01	SS-05 & HC-01	SS-05 & HC-01
RC-02	RC-01	RC-01
RC-03	RC-02	RC-02
EI-01	EI-01	EI-01
E-05	E-01* & E-04	E-01* & E-06
W-02	W-02	W-02
W-03	W-04	W-03
MO-02	MW-01	-

*for Renewable Energy calculations only.

22. **(Masterplan vs Building level certification)** In the case of a building pursuing Mostadam certification lies within a new construction masterplan development that is not pursuing Mostadam. Any masterplan features that are intended to contribute to the building's certification (negatively or

positively) shall also be incorporated in the submission. Example: Masterplan landscape design should still be submitted for Building level certification with consideration of applicable landscape area (within a 100-meter radius of the building) or the landscape design of the masterplan as a whole. This would apply to both the selection of plants and the irrigation system. The system should be compliant with Mostadam requirements if it intends to serve landscape irrigation for areas within the building's certification boundary. This does not apply to pre-existing systems.

23. **(Walking distance and radii variances)** Sustainable Building will allow up to 15% variance in walking distances or radii required under any Mostadam Standard.

24. **(Submission Documents)** All drawings submitted shall be in a format and level of detail that allows for easy and fast access by the assessor.

25. (Single vs Multiple Buildings)

For multiple structures to be considered as a single building the following conditions must be met:

- All structures are designed and constructed in parallel. That is the project is considered 1 project by the same developer and is only open/operational when all structures are fully constructed.
- All structures are owned by the same entity.
- The operator(s) shall follow the same policies and processes informed by the owner.
- The structures are physically connected through functional spaces (i.e. grand lobby, Mezzanine floor...etc). Distribution, parking and utility rooms are not considered functional spaces.
- They share the same end-use (i.e. all are offices, hospitality, mixed use or commercial)

26. (Campus and Group Submission Approach)

If multiple buildings are being developed within the same site, a group and campus certification approaches may be utilized as follows:

Campus:

For a project to be eligible for campus approach, all the buildings being developed have different end-uses (offices, retail, hospitality…etc) and they all must fall under the same Mostadam Rating Standard (example: All are applicable within Mostadam Commercial D+C).

The campus approach allows the project to submit campus credits only once for assessment and award across all the buildings.

Each building will be receiving its own certificate, as such for non-campus credits the project team must register and submit individual submissions per building.

The project team must use reasonable best judgement and effort in defining the campus boundary. The boundary definition must be confirmed by Sustainable Building prior to registration.

The following are the campus credits:

Commercial (D+C)

- All Site Sustainability credits
- All Transportation and connectivity credits
- All Region and Culture credits
- E-04 if the system feeds the site as a whole and not a specific building (or if RECs are used)
- W-02
- W-04
- HC-01
- HC-06
- HC-14 if parking is shared
- HC-15
- MW-02
- MW-03
- MW-05
- MW-06
- All Education and Innovation
- PMM-02
- PMM-03

Residential (D+C)

- All Site Sustainability Credits
- TC 01, 02, 03, 05
- All Region and Culture credits
- E-06, E-07
- HC-01, HC-09, HC-10
- All Materials and Waste
- All Education and Innovation
- PM-02

In cases where the credit requirements state a distance/radius requirement, that distance shall be calculated from the defined main entrance to the site as a whole. Where a site may have different entrances, the optimal entrance may be selected.

If the campus/site incorporates features that support any of the campus credits without the need to involve the surrounding area, the project team is permitted to utilize these features (example: Access to Amenities, the amenities may be within the campus/site or external to it).

Group Approach

Group approach applies for projects that include the development of multiple buildings within the same site in which all the buildings are of the same typology and end-use (example: all are multi-residential buildings). The buildings must all be applicable under the same Mostadam Rating Standard.

The group approach awards all the buildings a single certification, as such all buildings can fall under the same registration and submission.

The submission documents must address the collective performance of all the buildings (example: Energy performance path, the energy consumption of the proposed and baseline shall be evaluated for all the buildings combined).

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COMMERCIAL D+C

Commercial (D+C)

1) **(MW-04 Non-Polluting Insulation Materials)** The statement in the Supporting Guidance Only insulation material procured for onsite installation is to be considered in compliance with this credit. Insulation material that is a part of a product's composition or is assembled within electronic equipment manufactured offsite is excluded" and is no longer valid, all insulation material shall comply with the credit requirements.

2) **(E-01 Energy Performance)** The following evidence documents are required.

Option 2 – Performance Option:

a) Detailed Energy Model report with a summary of inputs, outputs, and discussion of the results and methodology. This shall include the engineering checks conducted to validate the outputs of the model such as but not limited to comparison of the EFLH of each end-use, evaluation of the EUI for both proposed and baseline models, and a comparison of the heat gains (external + internal) between proposed and baseline models.

b) Lighting Power Density calculation showing room ID, name, area, space type, total connected lighting load, Proposed LPD, and Baseline LPD. The calculation shall also have a summation showing the total Building LPD in addition to the room-by-room calculations.
c) Air-side HVAC equipment schedule showing unit type, fan power, on/off coil temperature, recirculated air flow rate, and fresh air flow rate.
d) The operational profiles used in the models

e) Supporting evidence for any auxiliary systems included in the project's design and energy model such as irrigation pumps, swimming pool temperature control systems, cooking equipment, data centers, elevators...etc.
f) the Energy Model shall account for the energy consumption of each expected end-use within the building, and these shall be clearly highlighted in the report

The Energy Tool shall be filled in such a way that it provides a granular overview for the Assessor on how the model was developed (for example: avoid reporting all HVAC systems in one input field instead of separate input fields associated with the different units/systems in the model).

3) (**E-02 Energy Metering)**

a) For hotel developments, the energy sub-metering for the guest rooms can be combined on a floor level. That is, the project does not need to sub-meter each individual guest room but can instead install the sub-meters at floor level to capture the consumption of each end-use within the guest rooms as well as in the common areas through the same sub-meter. Furthermore, guestrooms sub-meter shall cover only the HVAC system.

b) Projects can utilize different technologies to achieve the required sub-metering instead of physical meters. In particular the use of digital sub-meters through BMS is encouraged.

c) It is paramount for the project team to address sub-metering starting from the concept-design phase of the project to ensure the electrical network is designed and installed appropriately and cost-effectively to allow for sub-metering installations.

4) **(TC-03 Access to Amenities)** Prayer rooms may be used instead of Mosques to satisfy requirement 1, provided that the prayer room(s) have sufficient capacity to accommodate all the expected practitioners.

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Residential (D+C)

Residential (D+C)

1. **(HC-10 Outdoor Space)** The term Private Outdoor space refers to access and not visibility.

2. **(TC-03 Access to Amenities)** Prayer rooms may be used instead of Mosques to satisfy requirement 1, provided that the prayer room(s) have sufficient capacity to accommodate all the expected practitioners.

3. **(E-01 Energy Performance)** The following evidence documents are required.

   Design stage:

   a) Detailed EM report with a summary of inputs, outputs, and discussion of the results and methodology. This shall include the engineering checks conducted to validate the outputs of the model such as but not limited to comparison of the EFLH of each end-use, evaluation of the EUI for both proposed and baseline models, and a comparison of the heat gains (external + internal) between proposed and baseline models.

   b) Lighting Power Density calculation showing room ID, name, area, space type, total connected lighting load, Proposed LPD, and Baseline LPD. The calculation shall also have a summation showing the total Building LPD in addition to the room-by-room calculations.

c) Air-side HVAC equipment schedule showing unit type, fan power, on/off coil temperature, recirculated air flow rate, and fresh air flow rate.
d) The operational profiles used in the models
e) Supporting evidence for any auxiliary systems included in the project's design and energy model such as irrigation pumps, swimming pool temperature control systems, cooking equipment, data centers, elevators...etc.
f) the EM shall account for the energy consumption of each expected end-use within the building, and these shall be clearly highlighted in the report

The Energy Tool shall be filled in such a way that it provides a granular overview for the Assessor on how the model was developed (for example: avoid reporting all HVAC systems in one input field instead of separate input fields associated with the different units/systems in the model).

4. E-04 Energy Metering

a) For multi-residential buildings, the project team shall only provide sub-metering for the common areas, and a single main meter for each apartment (1 electric, and 1 BTU in the case of CHW systems).
b) Projects can utilize different technologies to achieve the required sub-metering instead of physical meters. In particular the use of digital sub-meters through BMS is encouraged.
c) It is paramount for the project team to address sub-metering starting from the concept-design phase of the project to ensure the electrical network is designed and installed appropriately and cost-effectively to allow for sub-metering installations.

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Communities (D+C)

Communities (D+C)

1. **(E-03 Energy Efficient System)** The project can demonstrate compliance with requirements 1 and 2 by either meeting the sustainability specifications stipulated in the standard or demonstrating a clear intention of the project's design to avoid the need for lifts and escalators to navigate a project's topography that would otherwise have required the need for lifts or escalators. Examples of this would be the use of only ramps and stairs to access different levels of the development (for underground parking for example) or ensuring that retail malls within the community are designed horizontally in the form of up to G+1 blocks as opposed to vertical geometry. Note that if the project's topography itself dictates that there is no practical need for lifts or elevators then these requirements would not be applicable to the project and cannot be targeted.

2. **(SA-02 Stormwater Management)** Redirection of rainfall water strategies may be used in addition/instead of infiltration and retention strategies.

3. **(CC-01 Local Amenities)** If the design or tenants for amenity spaces are not yet defined in the design stage, a commitment letter from the developer to reserve the spaces for amenities/community activity areas as required by Mostadam is sufficient for the design stage submission. During construction stage submission it is expected that a tenant has been identified.

4. **(CC-01 Local Amenities)** Prayer halls/rooms may be used instead of Mosques to satisfy requirement 1, provided that the prayer hall(s)/room(s) have sufficient capacity to accommodate all the expected practitioners within the catchment radius.

5. **(CC-02 Provision of Parking Parking)** For requirement 2, the width of the sidewalk to accommodate for special needs users shall be a minimum of 1.2 meters. No dedicated walkway is required, the pedestrian walkway itself can serve the purpose. The project's design documents shall clearly indicate the design's intent towards facilitating for special needs users. If a width other than 1.2 meters is used by the project team, it shall be referenced in an acceptable standard by local authority.

(W-03 Recycled Water) If the use of recycled water in water features poses a health risk, the project team shall demonstrate this through a water safety and risk assessment report. If satisfactory, the credit would be partially awarded for the use of recycled water in irrigation. The points awarded depend on the ratio of water demand for irrigation vs water features multiplied by the total available points (3) rounded up but do not exceed 2 points.

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