

4	ENERGY USE	4.P PREREQUISITE	
		EU P1 MINIMUM ENERGY PERFORMANCE	
	EXCLUSIONS	None.	
	OBJECTIVE	Establish the minimum level of energy performance for the systems serving project spaces.	
	REQUIREMENT	Demonstrate compliance with the latest edition of Building Energy Codes (BEC).	
	ASSESSMENT	<p>As of 21 September 2012, The Buildings Energy Efficiency Ordinance is in full operation; all newly registered BEAM Plus projects shall comply with the minimum energy efficiency requirements governing building services installations defined in the Ordinance, that includes lighting installation, air-conditioning installation, electrical installation and lift and escalator installation, covered by the BEC.</p> <p>The Client shall submit documents to demonstrate compliance with the pertinent sections of the latest BEC that include, but are not limited to:</p> <ol style="list-style-type: none"> a) plans and specifications showing details of scope of work, all pertinent data, features, equipment and systems of the project area including complete descriptions of materials, engineering data, test data, manufacturer's data, and all other data necessary to allow proper identification of components that affect the project area's energy use; and b) an energy analysis report prepared and certified by a qualified professional person. The energy analysis report shall include a formal certifying statement informing the scope of compliance and confirming the compliance with the BEC either by Prescriptive or Performance Option. The statement shall be accompanied by a set of documents, including as-fitted/installation drawings, design calculations and standard forms as required in the BEC. On the use of performance approach to demonstrate compliance, the statement shall include a report describing the simulation software, the simulation results, and the modeling assumptions. <p>Documents issued by the certifying body of the BEC, which confirm compliance, are recognised as an acceptable alternative to the submission of documents a) and b) above.</p>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div>
	BACKGROUND	Compliance with the Building Energy Codes [1] can reduce energy consumption and operating costs. The power plants in Hong Kong mainly use coal and natural gas as fuel to generate electricity. The reduction of energy leads to the saving of fossil fuels, and reduces carbon dioxide emissions which contribute to global climate change.	

1 Code of Practice for Energy Efficiency of Building Services Installation - Electrical and Mechanical Services Department HKSAR



Circular Letter No.: 2018.147 (Revision 1)

Issue Date: 14 May 2018

Revision Date: 25 June 2018

Application: BEAM Plus NB Version 1.1 & 1.2
BEAM Plus EB Version 1.1 & 1.2
BEAM Plus EB Version 2.0 Comprehensive Scheme and Selective Scheme
BEAM Plus BI Version 1.0

Effective Date: 14 June 2018

**Compliance of Building Energy Code & Energy Audit Code and
Baseline Criteria for Energy Simulation**

The Circular Letter clarifies the assessment requirement on the following pre-requisites and credits, which relates to the compliance of Building Energy Code (BEC) & Energy Audit Code (EAC) and the baseline standard for energy simulation:

- EU P1, EU 1 & EU 2 under BEAM Plus New Buildings v.1.1 & 1.2.
- EU P1, EU 1 & EU 2 under BEAM Plus Existing Buildings v.1.1 & 1.2.
- EU P1 & EU 2 under BEAM Plus v.2.0 Comprehensive Scheme and
EU 2 under BEAM plus v.2.0 Selective Scheme
- EU 1 under BEAM Plus Interiors v.1.0

1. **Technical Circular Letter No. 2016.132 dated 19 April 2016 and 2016.133 dated 13 May 2016 are hereby withdrawn.**
2. All submissions regarding the abovementioned pre-requisites and credits shall observe the requirements as indicated below:

BEAM Plus New Buildings v.1.1/1.2

3. The assessment criteria for EU P1 has been clarified as follows:

- i. For ALL projects undergoing Provisional Assessment (PA), the Applicant shall provide (a) an undertaking letter and/or (b) approval records of Stage One Declaration issued by Electrical and Mechanical Services Department (EMSD) declaring the BEC Edition that the building service installations in the development intends to follow. Supporting documents, such as energy analysis report and/or design report and/or relevant Technical Forms (e.g. Form EE-SU, EE-LG, EE-EL, EE-AC, EE-LE, EE-PB, etc.) with all relevant information filled in shall be submitted to support the project's compliance with the declared BEC Edition. 8 9 10
- ii. For new building projects undergoing Final Assessment (FA), the Applicant shall provide approval records on Certificate of Compliance Registration (COCR) issued by EMSD confirming the BEC Edition that the development has complied. If the project falls under Section 4 of the Building Energy Efficiency Ordinance (e.g. buildings not subject to the application of Building Energy Efficiency Ordinance), the Applicant shall then provide a finalized energy analysis report or relevant 11 12

Technical Forms (i.e. Form EE-SU, EE-LG, EE-EL, EE-AC, EE-LE, EE-PB, etc.) checked and certified by the project's Registered Energy Assessor (REA) to confirm that the building complies with the same BEC edition as approved in PA.

- iii. For *Major Retrofitting Works (MRW)* undergoing FA, the Applicant shall provide the **Form of Compliance (FOC)** accompanied by the relevant Technical Forms (e.g. Form EE-SU, EE-LG, EE-EL, EE-AC, EE-LE, EE-PB, etc.) to confirm on the building service installations' compliance with the prescribed BEC edition. All data within the FOC and its relevant Technical Forms shall be checked and be certified by the REA. **Evidences to demonstrate that the FOC and the relevant Technical Forms have been submitted to EMSD for records** shall also be provided to demonstrate the compliance of the credit.

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4. The methodology of the energy simulation for EU 1 & EU 2 has been clarified as follows:

- i. BEC as baseline standard: If the Applicant intends to adopt BEC as the baseline standard for energy simulation, the Applicant shall follow the same BEC edition as declared/confirmed under pre-requisite EU P1.
- ii. ANSI/ASHRAE/IES 90.1 (ASHRAE Standard 90.1) as baseline standard: If the Applicant intends to adopt ASHRAE Standard 90.1 as the baseline standard for energy simulation, the Applicant shall follow the latest edition of ASHRAE Standard 90.1 coming into effect at the time of first assessment submission¹, **except for lighting. For lighting**, the Applicant should adopt latest edition of BEC coming into effect at the first assessment submission. Subsequent assessments² shall follow the same edition of ASHRAE Standard as approved in PA.
- iii. Approved PA projects: For projects that have already completed PA and with specific baseline standards approved, the Applicant can continue to adopt the same baseline standard in preparing the energy simulation for subsequent assessments. For the avoidance of doubt, the Applicant shall provide relevant justifications (e.g. extract of the PA report, extract of energy simulation report submitted during PA, etc). during subsequent assessments to demonstrate that the energy simulation submitted for FA is utilizing the same baseline standards as in PA.

BEAM Plus Existing Buildings v.1.1/1.2

5. The credit name for EU P1 has been renamed as Energy Audit.
6. Technical Review Committee will accept energy audit report conducted in accordance with the EAC as an alternative in complying with the assessment requirement under EU P1. If the Applicant intends to adopt this method for assessment, the Applicant shall observe the following requirement:
- i. The date of completion of energy audit³ must be within the past 5 years of first assessment submission (e.g. If the first assessment submission is submitted on 1 January 2018, then the energy audit must be completed after 1 January 2013)⁴ with

¹ First assessment submission refers to the date when the initial assessment is formally accepted by BSL. For example, if the project has both PA and FA, then it would be the date when BSL formally accepts the project for PA submission. If the project has only FA, then it will be the date when BSL formally accepts the project for FA submission.

² Subsequent assessments refer to the assessment conducted after the completion of the PA (e.g. PA re-assessment, FA, etc).

³ The date of completion of the energy audit shall be the same date as indicated under item (A)(1) in Part 1 of the Executive Summary of Energy Audit Report for Energy Audit Code (Form EE-EAes) published by EMSD.

⁴ The wording of this paragraph has been updated on 25 June 2018.