Defining Positive Energy Buildings - A Spectrum Approach

<table>
<thead>
<tr>
<th>Type of Positive Energy Building</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Ideal Case (Zero Energy Footprint)</td>
<td>A &quot;Zero Energy Footprint&quot; building that produces energy from renewable sources that meet or exceed the energy consumption for thermal comfort levels as it is not metered separately.</td>
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<tr>
<td>Ambitious Case (All Positive Energy Buildings)</td>
<td>A positive energy building is a building that produces energy from renewable sources that is as much energy as it consumes to achieve appropriate thermal comfort levels.</td>
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<tr>
<td>Holistic Case (Positive Energy Building)</td>
<td>A positive energy building is a building that produces energy from renewable sources that is as much energy as it consumes as thermal comfort needs, including plug loads, to achieve appropriate thermal comfort levels.</td>
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<tr>
<td>Inspirational Case (Net Zero Energy Building)</td>
<td>A &quot;net zero energy&quot; building is a building that by and large produces enough energy from renewable sources to consume as thermal comfort needs, including plug loads, to achieve appropriate thermal comfort levels.</td>
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<tr>
<td>Basic Case (Nearby Zero Energy Building)</td>
<td>A &quot;near zero energy&quot; building is a building with extremely low energy consumption that is close to achieving net zero energy consumption.</td>
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</table>

**Sustainability in this context refers to energy efficiency.**

Systems boundary:
- Energy consumed must be produced on-site or by renewable sources. 
- Includes all common energy use in a building including heating, cooking, ventilation, dehumidification, domestic hot water and plug loads. Essential services (i.e. elevators etc.) will also be included in larger buildings.
- Includes energy demand for heating, cooking, ventilation, dehumidification, domestic hot water and integrated lighting systems.
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Energy balance:
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