Path to Net Zero Early Design Meeting Agenda and Report Template for:

<Project Name>

Meeting Date, Time & Location:

|  |  |
| --- | --- |
| Required Attendees: | Recommended Attendees: |
| <Owner> | <Building Operator> |
| <Architect> | <Commissioning Agent> |
| <Mechanical Engineer> | <Other Renewable Experts> |
| <Energy Analyst> |  |
| <Lighting Designer> |  |
| <General Contractor (if applicable)> |  |
| <Energy Trust Program Representative> |  |
| <Solar Ally (if applicable)> |  |
| <Meeting Facilitator> (Can be other project team member) |  |

1. Meeting Objective: Determine energy strategy to achieve PTNZ program goals
2. Meeting Outcome: Agreement on energy savings priorities and identification of follow-up questions required to assess feasibility
3. Discussion Topics:

*(The details listed below are meant to be suggestions/guidelines. The purpose of the charrette is to focus on sustainable development goals, strategies, and integrated design solutions. Meeting attendees should seek ways to use the site to leverage energy saving opportunities, as well as to design and equip the building structure for energy efficiency).*

* 1. Example case study or best practices of high efficiency buildings of same type
  2. Project description and performance goals
     1. Building Attributes: identify project’s program requirements, attributes that are fixed and those open for evaluation of opportunity to impact energy performance
        1. *Shape, Orientation, Massing, Type, Usage, Occupancy schedule*
     2. Energy Use Intensity (EUI) targeting
        1. Estimated “typical building” EUI
        2. Estimated code-minimum baseline EUI
        3. Setting the right target for the project
        4. Proposed net EUI (energy consumption minus renewable generation)
     3. Alignment with Architecture 2030 Challenge targets
     4. Results of preliminary energy analysis (shoebox modeling)
     5. Results of studies identifying climate conditions and site potential
  3. Strategies for achieving Path to Net Zero goals
     1. Reducing loads
        1. *Glazing percentage*
        2. *Glazing performance*
        3. *External shading*
        4. *Wall performance*
        5. *Roof performance*
        6. *Infiltration*
        7. *Daylighting*
     2. Designing passive systems
        1. Natural ventilation
        2. Solar heating
        3. Other
     3. Designing efficient active systems
        1. Efficient HVAC system selection
        2. High efficiency lighting design
        3. Domestic hot water systems
     4. Considering occupant behavior and plug loads
        1. High efficiency office equipment
        2. Laptop computers
        3. LED task lighting
        4. ENERGY STAR® appliances and equipment
  4. Using renewables to meet remaining demand
     1. Solar and Solar Ready design (if applicable)
     2. Other renewable systems
  5. Other considerations
     1. Operation and maintenance strategies
     2. Unique contract requirements that support integrated delivery
     3. Resilience
        1. *On site solar and battery storage*
        2. *Backup generation*
        3. *District energy systems*
        4. *Micro grids*
        5. *Passive cooling, ventilation and daylighting*
        6. *Prioritization of critical loads*
     4. Server closet / server room efficiency
        1. Install high efficiency (ENERGY STAR) equipment (including servers, networking equipment, PDUs, HVAC equipment, UPS)
        2. Uninterruptible Power Supplies (UPS)
           1. Size UPS units to operate at peak efficiency

Consider UPS requirements (protection, redundancy, etc.) when purchasing UPS

1. Working with the Energy Trust New Buildings program
   1. Path to Net Zero process, support, and requirements
   2. Lifecycle cost analysis of energy measures
   3. Passive design strategies and additional design studies (CFD, daylighting, shoebox modeling, etc.)
   4. Monitoring building performance
   5. Scope of commissioning
2. Next Steps
   1. PTNZ Eligibility
      1. Establish EUI target
      2. 50% Construction Document Review
      3. Functional Testing Required
   2. Action Items
   3. Next Meeting