

**DRAFT - schedule changes weekly**

**PANEL: 10 - Net Zero, Net Positive (Evergreen)**

| Day       | SESSIONS  | LEAD AUTHOR/ORGANIZATION                                 | TITLE  |
|-----------|---|--|--|
| Mon 8/22  | Session 1<br>8:30 am - 10:00 am<br>What are They?                   | Kent Peterson, P2S Engineering, Inc.                     | A Common Definition for Zero Energy Buildings  |
|           |   | Paul Torcellini,<br>National Renewable Energy Laboratory | Analysis of Different Methods of Computing Source Energy                                     |
|           |   | Abhijeet Pande, TRC Companies, Inc.                      | So You Say You have Built a ZNE Building, Prove It!  |
|           | Session 2<br>10:30 am - 12:00 pm<br>Feds & State ZEB<br>Programs    | Nick Jones, Eversource Energy                            | Zero Net Energy: Available and Scalable  |
|           |   | Richard Faesy, Energy Futures Group                      | Moving Vermont Existing Homes to "Zero Energy Now" through a Comprehensive Retrofit Approach |
|           |   | Solome Girma, U.S. Department of Energy                  | Driving Market Adoption of Zero Energy Schools   |
| Tues 8/23 | Session 1<br>8:30 am - 10:00 am<br>Residential Case<br>Studies      | Bethany Sparr,<br>National Renewable Energy Laboratory   | Case Study on Long-Term Performance of Net-Zero Energy Home                                  |
|           |   | Nicholas Collins, ERS                                    | Measured Performance of Net Zero Energy Homes in NY State                                    |
|           |   | Dave Chasar, Florida Solar Energy Center                 | From Energy Guzzler to Near Zero Energy Home: Lessons from the Phased Deep Retrofit Project  |
|           | Session 2<br>10:30 am - 12:00 pm<br>Non-Residential Case<br>Studies | Jim Maskrey, University of Hawaii                        | Positively Net Zero: Case Study of Performance Simulation and Hitting the Targets            |
|           |   | Robert Hutchinson, Rocky Mountain Institute              | How to Buy a Netzero Office  |
|           |   | Amy Nagengast, MKThink                                   | ZNE vs. Comfort: A Holistic Look at High Performanc  |

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| Wed 8/24   | Session 1<br>8:30 am - 10:00 am<br>Metrics Matter for<br>Decarbonization                                   | Imran Sheikh, Energy and Resources Group                     | Implications of Electrified Residential Space Heating in California  |
|            |  | Victoria Clark,<br>Energy + Environmental Economics          | Preliminary Economic Outlook for California Residential ZNE  |
|            |  | Meg Waltner,<br>Natural Resources Defense Council            | Does Zero Net Energy Mean Zero Net Carbon? Reevaluating California's Time-Dependent Valuation Metric as the State Moves toward a Net Zero Code |
|            | Session 2<br>10:30 am - 12:00 pm<br>City Districts   | Ben Polly,<br>National Renewable Energy Laboratory           | From Zero Energy Buildings to Zero Energy Districts  |
|            |  | Rebecca Zarin Pass,<br>Lawrence Berkeley National Laboratory | A Tale of Three District Energy Systems: Metrics and Future Opportunities  |
|            |  | Betty Seto, DNV GL   | Zero Net Energy Communities: Three Cities Leading the Way  |
| Thurs 8/25 | Session 1<br>8:30 am - 10:00 am<br>Technology and<br>Metrics   | Nelson Brito, Universidade de Coimbra                        | From the 16th to the 21st Century: Upgrading Traditional Knowledge to Approach Net Zero Goals in Existing Neighborhood Upgrades (ZERH-NU)      |
|            |  | Alexi Miller, New Buildings Institute                        | Zero Net Energy Building Controls: Characteristics, Energy Impacts, and Lessons  |
|            |  | Marshall Hunt, PG&E  | Zero Net–Balancing Energy Efficiency and Renewable Generation  |
|            | Session 2<br>10:30 am - 12:00 pm<br>More than One Way to<br>Skin the Cat: Different<br>Residential Methods | Ann Edminster, Design Avenues                                | Zero Energy Homes: Seeing is Believing   |
|            |  | Jim Young, Navigant Consulting, Inc.                         | ZNE Simulation Study: Homes with Mixed Fuel vs. Electric Only  |
|            |  | Bievenido Clarin,<br>Electric Power Research Institute       | Establishing Feasibility of Residential Zero Net Energy Community Development: Learnings from California's First ZNE Neighborhood              |
| Fri 8/26   | Session 1<br>8:30 am - 10:00 am<br>Design Process  | Lizzie Adams, PAE Engineers                                  | Occupant-Centered Design: Changing How We Design Health and Comfort Systems  |
|            |  | Carrie Brown, Resource Refocus LLC                           | Measured Zero Net Energy Performance: Results, Lessons, and Surprises  |
|            |  | Shanti Pless,<br>National Renewable Energy Laboratory        | Technical Feasibility for Zero Energy K-12 Schools   |
|            | Session 2<br>10:30 am - 12:00 pm<br>Marketplace and<br>Barriers  | Stephanie Berkland, TRC Companies, Inc.                      | What More Can California Do to Achieve the 2020 Residential ZNE Goals? We Asked the Market...  |
|            |  | Margaret Pigman, Resource Refocus LLC +C36                   | Lessons Learned for a Zero Net Energy Production Builder Demonstration   |
|            |  | Ram Narayanamurthy,<br>Electric Power Research Institute     | Grid Integration of Zero Net Energy Communities  |

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| <b>ALTERNATES</b> |          | Ming Hu, University of Maryland                          | Net Positive Building and Alternative Energy in an Institutional Environment   |
|                   |          | Christopher Meek, University of Washington               | Metered Energy Efficiency Transaction Structure in Net-Zero New Construction: Pay-For-Performance at the Bullitt Center in Seattle, WA |
|                   |          | Karl Johnson,<br>CA Institute for Energy and Environment | Direct Current as an Integrating Platform for ZNE Buildings with EVs and Storage: DC Direct Systems - A Bridge to Low Carbon Future??? |
|                   |          | Nehemiah Stone, Stone Energy Associates                  | A Codes and Standards Path to Achieving Zero Net Energy for Low-Rise Multifamily Buildings   |
|                   |          | Tania Ullah, U.S. Department of Commerce                 | Energy and Indoor Air Quality Benchmarking of the NIST Net-Zero Energy Residential Test Facility (NZERTF)                              |
|                   |          | Celia King-Scott, DNV GL                                 | Measuring up to Net Zero: The Status of New Construction Programs and How They Can Further Net Zero Energy in the Commercial Sector    |
|                   |          | Wei Feng,<br>Lawrence Berkeley National Laboratory       | Impact Analysis of Developing Net Zero Energy Buildings in China   |