Strategic Plan: Energy Modeling Department (3-Year Horizon)

### I. Vision & Role

**Vision Statement:** To become a leading authority in performance-based energy consulting for code compliance, 3rd party certifications, ESG reporting, and decarbonization goals through technical excellence, innovation, and research.

**Department Role:** - Support code compliance (e.g., Title 24, ASHRAE 90.1, IECC) - Provide analytical services that guide clients in achieving their energy and carbon reduction goals - Inform design decisions with data-backed analysis - Enable eligibility for tax incentives (e.g., 179D), third-party certifications (e.g., LEED), and ESG reporting requirements

### II. Strategic Goals & Pillars

| Pillar | Strategic Goal |
| --- | --- |
| **1. Technical Excellence** | Deliver high-accuracy, performance-based modeling using advanced tools and calibrated workflows, while expanding capabilities, accuracy, and speed with modern techniques |
| **2. Regulatory Readiness** | Proactively adapt to evolving codes and policies (T24, ASHRAE, ESG, IRA/179D, SEC, SB 261/253) |
| **3. Market Adaptability** | Focus on project types and modeling scopes that align with strategic growth areas and avoid one-off or high-effort/low-yield opportunities |
| **4. Scalable Delivery** | Streamline project delivery through automation, standardized templates, and QA protocols while reducing risk of team burnout |
| **5. Team Development** | Upskill modelers in tools, codes, client engagement, and analytics |
| **6. Innovation & Integration** | Explore integration with LCA, electrification modeling, eGRID, renewables, etc. |

### III. Action Plan by Year

#### Year 1: Foundation & Readiness

* Standardize Title 24 modeling templates for multifamily residential, hotels, office, and warehouse project types
* Develop baseline modeling templates for IESVE and EnergyPlus, aligned with ASHRAE 90.1 workflows
* Standardize LCA modeling processes to support ESG disclosures, LEED documentation, and broader decarbonization efforts
* Define ESG reporting scopes and processes, including emissions quantification, scenario analysis, and alignment with SB 261, SB 253, and investor-grade frameworks (e.g., TCFD, CDP)
* Integrate energy, carbon, and financial modeling scopes to identify the nexus between environmental and financial goals
* Develop and standardize intake tools for energy modeling requests — including scope definition, pre-checks, and intake QA templates
* Train a new cohort of energy modelers, including onboarding, compliance workflows, advanced tool literacy, and foundational understanding of Title 24 Part 6, IECC, and ASHRAE 90.1
* Develop model conversion tools to reduce redundancy and enable streamlined translation between platforms (e.g., CBECC → IDF, IDF → IESVE)

#### Year 2: Growth & Automation

* Automate QA/QC workflows for CBECC, IESVE, and Revit to increase efficiency, reduce rework, and catch common issues early in the process
* Cross-train modelers in CBECC, IESVE, EnergyPlus/OpenStudio, and integrated modeling pipelines
* Expand modeling capabilities to support:
  + TOU-based renewable and battery dispatch modeling that reflects real-world operating behavior, including solar PV, storage, and demand shifting under realistic rate structures
  + Integrated Energy, Carbon, and Financial analytics tailored to Regulatory, Compliance, or Investor goals (e.g., tax credits, ESG targets, cost-optimized decarbonization)
  + Whole life-cycle carbon services that combine embodied and operational carbon analysis for project- or portfolio-level planning
* Publish internal playbooks that clarify:
  + Best practices for design-phase energy optimization and feedback
  + Modeling distinctions between incentive-focused and code-minimum workflows
* Introduce semi-automated model translation workflows between platforms (e.g., CBECC → IDF → IESVE)

#### Year 3: Innovation & Integration

* Integrate workflows across energy, cost, carbon, and ESG platforms, enabling consistent outputs across LCA tools, IRA compliance tools, and investment-grade assessments
* Launch parametric modeling tools for early-phase massing, envelope, and HVAC tradeoff studies with embedded compliance logic
* Develop “Energy & Carbon Strategy” consulting packages for developers and design teams, offered in pre-development or entitlement phases
* Coordinate whole-building modeling scopes (energy, carbon, water, health) to support certifications such as LEED, WELL, and 179D/45L tax incentives
* Train senior staff in client-facing storytelling — translating technical results into actionable business or policy insights for executives, investors, and authorities having jurisdiction (AHJs)
* Pilot integrated dashboards or “single source of truth” reporting for client portfolios, combining design assumptions, modeling outputs, and ESG metrics
* Expand modeling services to support existing building initiatives, including portfolio-wide energy monitoring, targeted energy audits, and LEED for Existing Buildings (LEED-EB) certification pathways

### IV. Key Metrics of Success (Condensed Strategic Version)

| Metric Area | Representative Metrics |
| --- | --- |
| **Project Delivery** | % on-time deliverables; avg. turnaround; QA/QC pass rate |
| **Workforce Development** | Cross-trained staff %; certifications; hours saved via automation |
| **Design Impact** | # of projects influenced by feedback; cost savings; LEED certifications |
| **Environmental Impact** | Annual kWh and MTCO₂e savings; performance vs. code and basis of design |
| **Strategic Client Value** | Scope expansions; client retention and repeat work |
| **Innovation & Tools** | Tools piloted; workflows automated or integrated |
| **Market Transformation** | % All-Electric/NZE/NZC projects; portfolio shifts; conferences, partnerships, publications |

### V. Risks & Contingencies

| Risk | Mitigation Strategy |
| --- | --- |
| Staff burnout or turnover | Automate routine tasks; prioritize analytical work; define clear career paths |
| Regulatory complexity | Assign compliance lead; maintain code library; engage in code working groups |
| Policy volatility | Diversify services with voluntary frameworks; stay regionally agile; support market-driven decarbonization |
| Design delays | Use structured intake forms and QA gates aligned to milestones |
| Cost constraints | Offer tiered services; show value with scenario tools and dashboards |
| Workflow fragmentation | Standardize templates and translation workflows across platforms |
| Client inaction | Improve storytelling and executive framing of insights |
| Scope creep | Define scope boundaries; use checklists and change order protocols |

### VI. Strategic Enablers

| Enabler | Role in Strategy |
| --- | --- |
| Leadership commitment to innovation | Protects time and resources for R&D and tool development |
| Cross-functional collaboration | Embeds modeling in LEED, LCA, ESG, and compliance workflows |
| Client and reviewer feedback loops | Improve QA/QC and reduce jurisdictional risk |
| Cloud-based tools | Support scalable, consistent modeling with remote teams (e.g., Python, GitHub, Excel, Dropbox) |
| Strategic storytelling | Increase adoption of modeling insights and decision-making value |
| Industry presence and partnerships | Stay ahead of policy trends and drive best practices |
| Modular workflow design | Future-proofs tools for evolving technology and policy needs |