COHESIVE ACTIONS: to Avert Climate Change, Make Money, Power our State with Clean Energy, and Nurture Thriving Communities

# white + burke **VERMONT DEVELOPMENT** CONFERENCE

# AGENDA

30 min information from the field: Bill, Eveline, and Chad
20 min break out session
15 min full group synthesis

## What industry are you in?

- Developer
- Broker/Lender
- Architect/Engineer
- Attorney
- **Environmental Scientist**

Business Owner Planner Government Local Stakeholder





## Vision + small steps

## NRG: Model Net Zero Energy Office and

### Manufacturing



## Educational and Community Outreach

lac

#### Maclay Architects

#### New Mixed Use NZE 300,000 sf Neighborhood

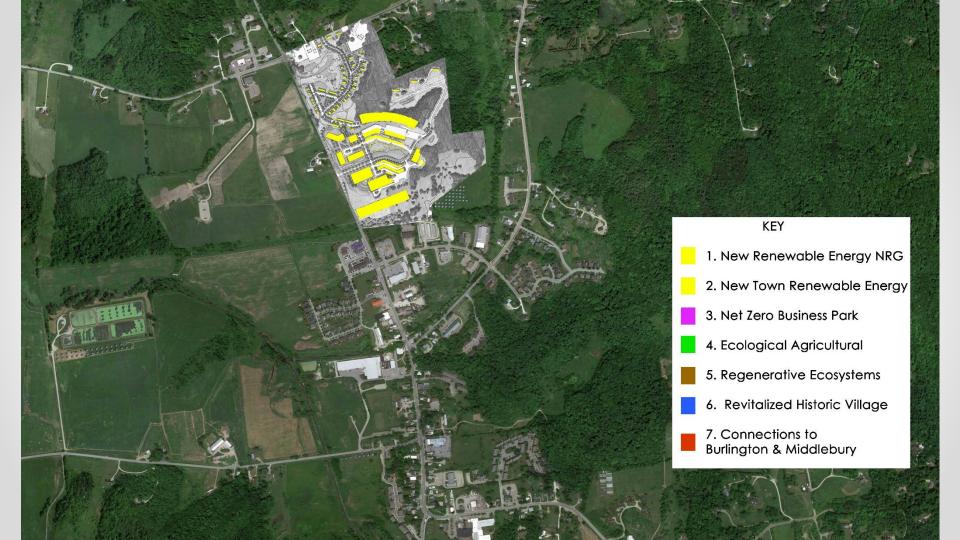


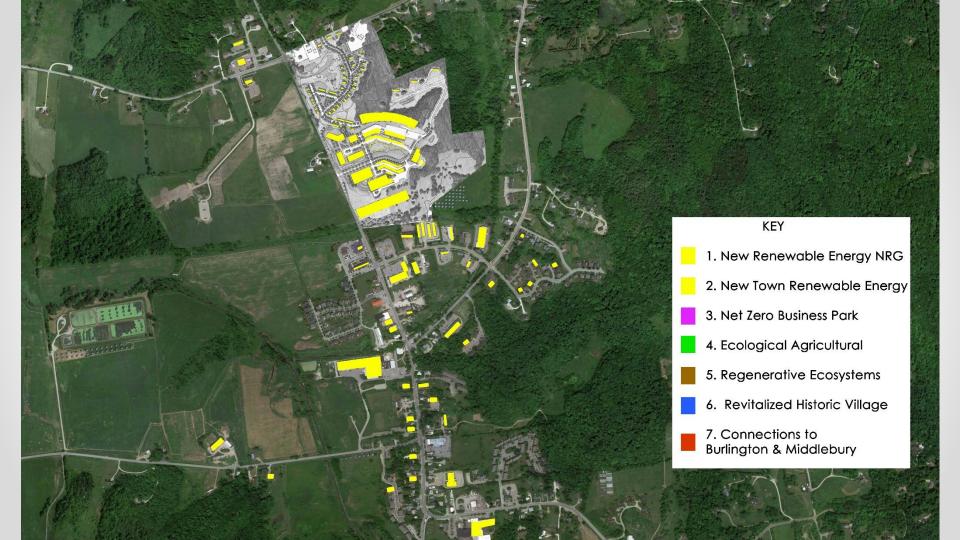


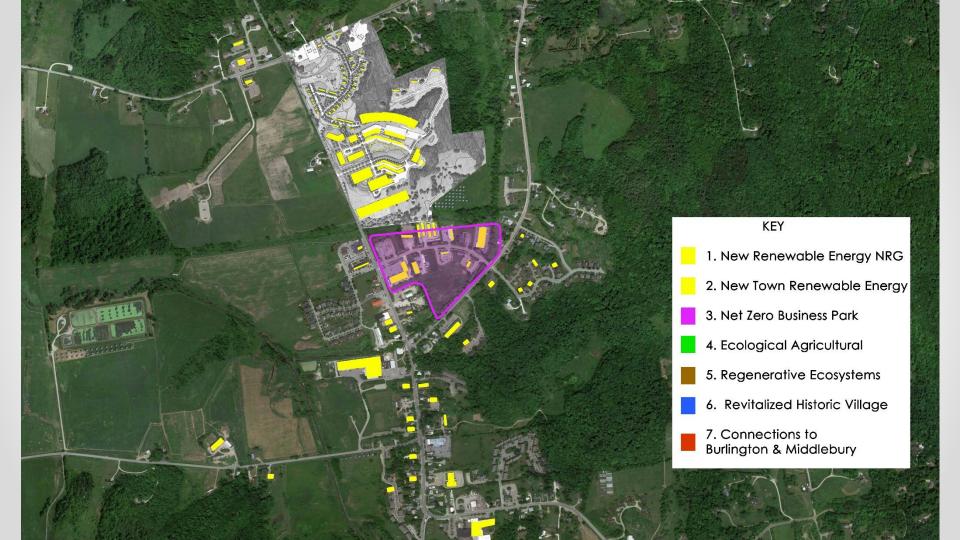


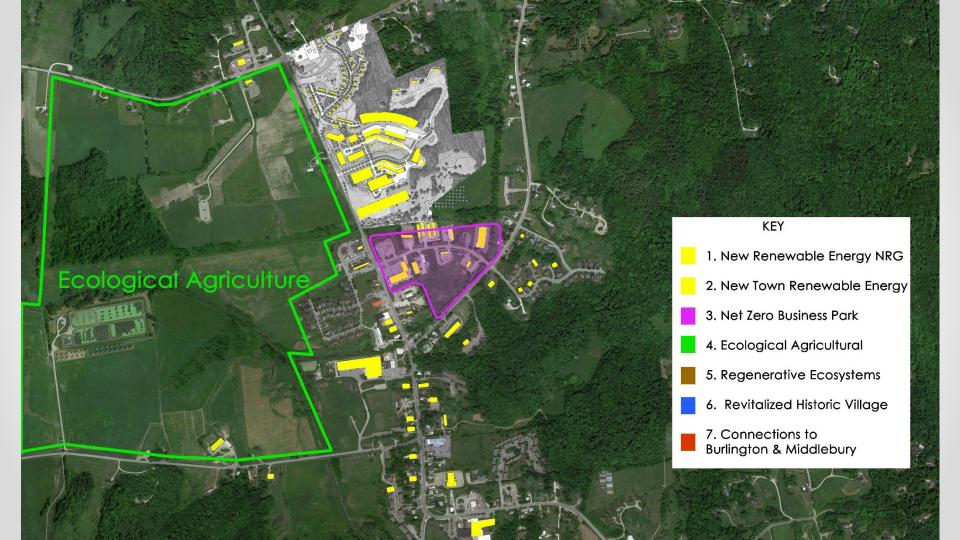








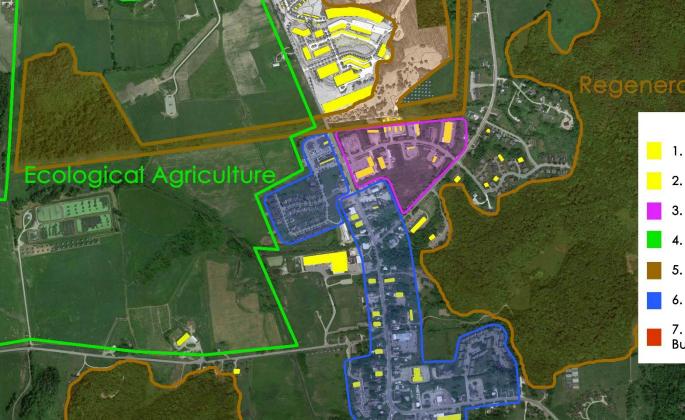






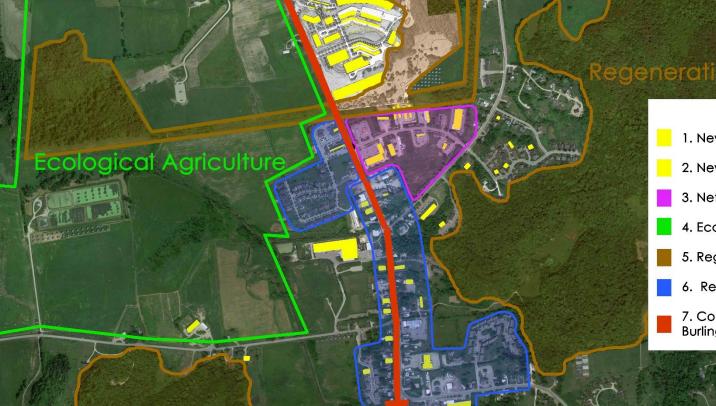
#### enerative Ecosystems

1. New Renewable Energy NRG 2. New Town Renewable Energy 3. Net Zero Business Park 4. Ecological Agricultural 5. Regenerative Ecosystems 6. Revitalized Historic Village 7. Connections to Burlington & Middlebury



#### egenerative Ecosystems

KEY
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2. New Town Renewable Energy
3. Net Zero Business Park
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#### Business + Developer+ Community

Collaboration/Partnership

### Your Ideas and Actions

## for a Renewable VT

550

PER UN

#### The Vermont Global Warming Solutions Act

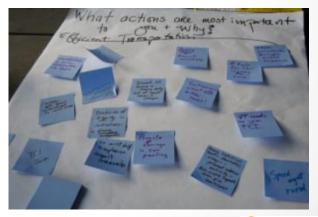




## Vermont Climate Council

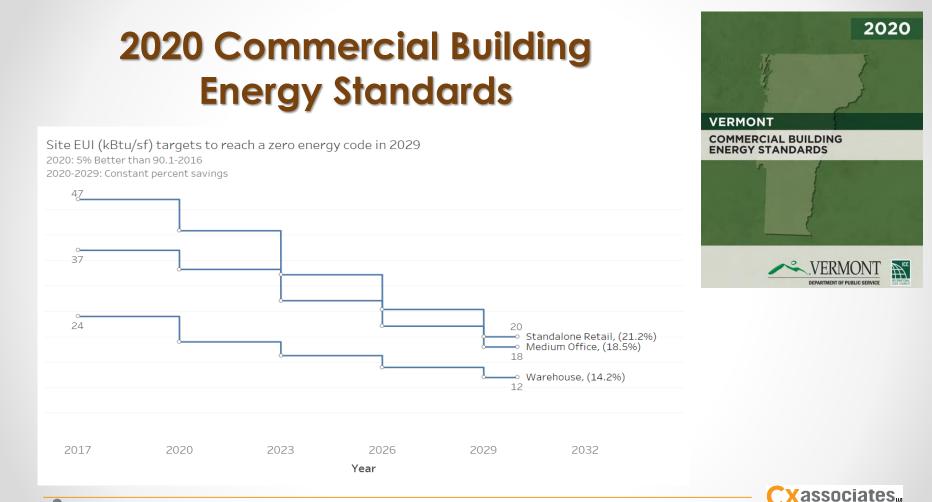




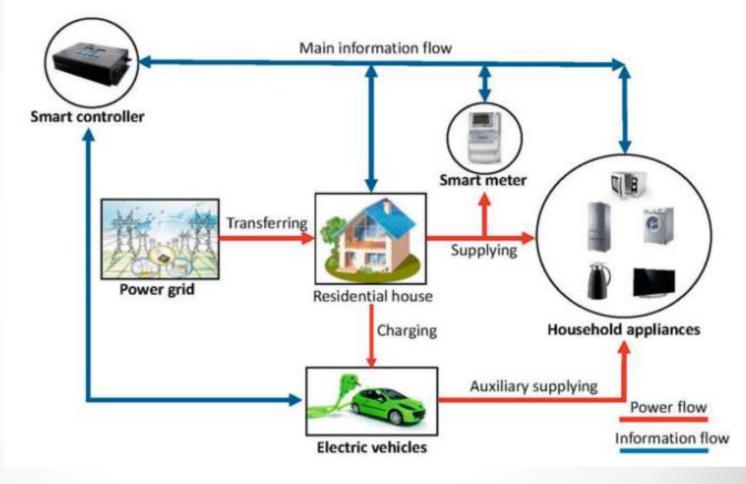




engineering better buildings for people and planet



engineering better buildings for people and planet



**Kassociates** 

New Clean Energy Opportunities

#### Lessons Learned











Encore's 5 MW Brattleboro ,VT landfill solar project



#### Big Picture Ahead for Energy

- Disruption!
  - Continued decreasing price points for RE
  - Increasing fossil fuel pricing (eg. CURRENT natural gas market)
  - Peak fossil fuel 2019?
- Electrification 2-3X + increased electric load
- Storage Load shifting
- More transmission required
- Focus on reliability and resiliency
- Capital markets are engaged





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#### Forward thinking for a changing world

- Electrification of Everything
   Electrification IS efficiency
- Additionality is required for climate
- DERs required for grid stability
- Interface between transmission and distribution networks
- Storage market evolution
- Look forward 10, 15 years and plan today!



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#### Challenges

- Nascent industry with evolving, new technologies
- Dependence on state and federal policy
- In the US: 50 market industry
- Utility engagement / grid condition
- Dated regulatory approval processes
- Project siting tensions
- Next recession in '25 or '26



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#### Opportunities

- Need for energy security TX, CA, LA examples
- Increasing cost competitiveness of RE vs. fossil fuels
- Abundant capital
- Increasing focus on carbon risk in financial markets
- Demographics / public will





#### **BIF and Build Back Better Bills**







#### Thank you!

Photo: Encore's Project for Stowe Electric Dept. on Former Gravel Pit (During Construction)

web: www.encorerenewablenergy.comtel: (802) 861-3023email: info@encorerenewableenergy.com



# SYNTHESIS



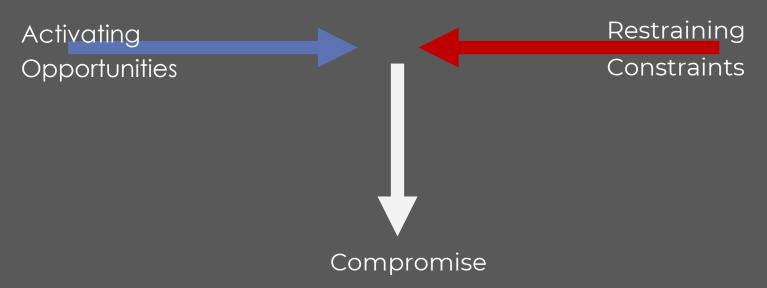
### Restraining Constraints

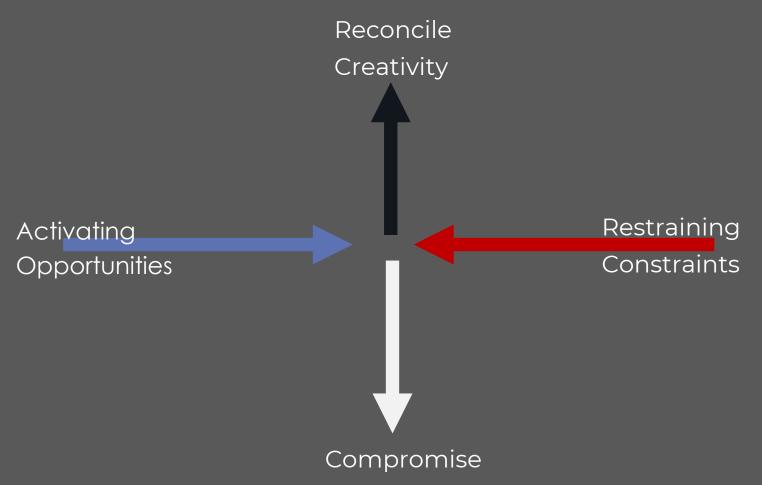
- Expensive construction materials
- Code enforcement
- Energy project siting tensions





- Carbon storing buildings/materials available now
- VT Global Warming Solutions Act
- Biden infrastructure plan
- Renewable cost competitiveness







## Go to: www.menti.com

Use the code:

4872 7273

# What are the challenges/constraints you see in Vermont?





Mentimeter

## What are the potential/opportunities you see in <sup>Mentimeter</sup> Vermont?



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Challenges · NORKFORCE OCHANGE OULTURE / THINKING

- · GREAT RESIGNATION 1 - BROADBAND ACCESS
- RELUCTANCE TO CHANGE
- . TRANSPORTATION LACK OF PUBLIC
  - ELEG INFRASTRUCTURE=OLD |
- · HOUSING (AFFORDABLE)
- O CODE ENFORCEMENT OF ENERGY CODE
- · POLITICS = VOLATILE, STAGNATION-LACK OF MOVING FORWARD = LACK OF LEADER SHIP (FOCAL BOARDS)
- · SOLAR (NIMBY) AND WIND PERCEPTION
- · TRANSMISSION (ELEC) CONSTRAINTS
- · INCENTIVES FINANCIAL

Opportunities \* INCENTIVIZE TALENT FROM GITIES / autoide VT \* TECHNICALED. DEMORACING VT. HISTORICAL CULTURE WHILE EMBRACING "HEW" RESIDENTS WHO BRING TALENT, EDUCATION, "VT. NOW IS SEEN AS A GREAT PLACE TE RAISE FLMILY COVID I COVID HAS ALLOWED US TO MEET W/O DRIVING " S. BURLINGTON EXAMPLE OF MIXED USE HEIGHBORHERS VI II IS FORWARD THINKING ZONING= NET ZERO ?? & STRENGTHENING (FURTHER) ENERGY CODE

- & POLITICAL LANDSCAPE/LEGISLATION is BETTER THAN NATIONAL . DEMONSTRATION OF WHAT
- ACCESS TO FUNDS / IN CENTIVES

artunities

#### · LISTENING · LEGOLATION · REGS THAT PREMOTE WHAT WE WANT · ALLON MGATIVES · POLITICK WILL · LOE · BBB - CASH OPTION time

Chalenges

ANTIONATED PERMITTING REDIESS OLD THINKING ABOUT COSTI CARBOR ACCOUNTING TENSIENS CONTRACTOR TEANNOG/KNOWLEDGE INCUMBENTS US. UPSTARTS SUSPICION AIS HARD

Challenges COST - WERE INCONTIVES EXISTING STOCK/CHANGE CODES INCREASING COST BOI / PAYBACH Equication impact POLICY . RATES/CHANGING Net Metering Policy / allocations TECHNOLOGY - FUTURE PLAN GOALS-ACHEIVABLE?

Opportunities densit towns FUNDING - FEO + STATE LOW COST LONGS PARTNERSHIPS INTEGRATION OF COMPONENTS Éducation Policy Flexible Load Management elvoking Technology Code B+D- parale, ted, B+D- parale, ted, COVID flee & cities

## les

- EOGRAPHY - COMMUNITIES SPREAD OUT

#### FINANCING

CULTURE - HOW TO REIMAGINE CURRENT USE FEAR OF CHANGE (DON'T FIX WHAT'S OWNERSHIP 3 DON'T OWN CAN'T INVEST NOT BROKEN

TNERASTRUCTURE - TRANSPORTATION

GRID UPGRADES INTERNET EN CHARGING

Opportunities

MELDING OF HISTORIC CHEW W/ IMPROVEMENTS LARGE STOCK OF EXISTING ABANDOND BUILDINGS WILLINGNESS TO EVALUATE NON-ENERGY BELIEFITS RE: ROIL -EXPANDING DEFINITION OF ROI -VERMONT FOCUS ON THIS SUBJECT MONATIZE, PROGRESS DECARB RESHAPING RELATIONSHIPS BETWEEN SECTORS (NON-SILD).

BUSINESSES / UTILITIES / RESIDENTIAL SWORTING TOGETHER SHARING RESOURCES HAVE TECH TO DO THIS LOST EFFECTIVELY

REPOSITION OUR ECONOMY LOW IMPACT (TECH) ECONOMY REMAKE

E-COMMERCE & VIRTUAL COMMUNICATION REPURPOSE BUS. SPACES

I EADERSHIP AUTOMATED EFF : PROCESSES CONTROL - SMART METERING

## **THANK YOU**



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