Oil Independent Oakland (OIO) By 2020 Task Force — AGENDA

Thursday, November 8, 2007 — *Special* Meeting

Members:

Jane Seleznow	District 1	Mike Petouhoff	At Large
Louise Bedsworth	District 2	Parin Shah (Chair)	Mayor
Ian Kim (Vice Chair)	District 3	*Vacant*	Mayor
James Lutz	District 4	Richard Heinberg	Mayor
Shannon Graham	District 5	Patrick Tang, Esq.	Deputy City Attorney
David Room	District 6	Alice Glasner	Public Works Legislative Analyst
Richard Register	District 7		

BUSINESS MEETING: 6:00 pm to 9:00 pm
Hearing Room 3, City Hall, One Frank H. Ogawa Plaza

AGENDA*

1. Roll Call and Establishment of Quorum.
2. Open Forum.
3. Approval of Draft Minutes of October 18, 2007 meeting. (A)
4. Continued Discussion (from October 18, 2007 Meeting) of Targets for Petroleum-Use Reduction. (I/A)
5. Continued Discussion (from October 18, 2007 Meeting) of Task Force Recommendations and the Final Action Plan Framework, Including its Format, Organization, Prioritization, and Content, and Development of Preamble/Introduction. (I/A)
6. Future Agenda Items. (A)
7. Announcements. (I)
8. Adjournment.

*The order of the items on the Agenda may be changed by the Chair.
I = Informational Item / A = Action Item

Persons may speak on any item appearing on the agenda; however, a Speaker Card must be filled out and given to the OIO Task Force administrative representative *before that item is called*. Multiple agenda items cannot be listed on one speaker card. If a speaker signs up to speak on multiple items listed on the agenda, the Chairperson may rule that the speaker be given an appropriate allocation of time to address all issues at one time (cumulative) before the items are called. All speakers will be allotted 3 minutes or less – unless the Chairperson allots additional time.

CITY OF OAKLAND
1 Frank H. Ogawa Plaza, 2nd Floor, City Hall, Oakland, CA 94612
TEL: (510) 238-7031 / FAX: (510) 238-6129 / ArronaM@oaklandnet.com
http://www.oaklandnet.com/Oil/default.html

This meeting is wheelchair accessible. In compliance with the Americans with Disabilities Act, if you need special assistance to participate in the meetings of the Oil Independent Oakland By 2020 Task Force, please contact the Office of the City Administrator at (510) 238-3301. Notification two full business days prior to the meeting will enable the City of Oakland to make reasonable arrangements to ensure accessibility. In compliance with Oakland's policy for people with chemical sensitivities, please refrain from wearing strongly scented products to events.

If you have questions or concerns regarding this agenda, or to review any agenda-related materials, please contact the Oil Independent Oakland (OIO) By 2020 Task Force at (510) 238-7031.

Oil Independent Oakland (OIO) By 2020 Task Force **Regular Meeting**

Thursday, October 18, 2007, 6:00 pm to 9:00 pm ***Draft Minutes***
Hearing Room 1, City Hall, One Frank H. Ogawa Plaza

Members:

Jane Seleznow	District 1	Mike Petouhoff	At Large
Louise Bedsworth	District 2	Parin Shah (Chair)	Mayor
Ian Kim (Vice Chair)	District 3	*Vacant*	Mayor
James Lutz	District 4	Richard Heinberg	Mayor
Shannon Graham	District 5	Patrick Tang, Esq.	Deputy City Attorney
David Room	District 6	Alice Glasner	Public Works Legislative Analyst
Richard Register	District 7		

Task Force Members Present:	Bedsworth, Heinberg, Graham, Room, Shah, Register, Petouhoff, Seleznow
Task Force Members Excused:	Lutz, Kim
Staff Members Present:	Alice Glasner, Public Works Committee Legislative Analyst

BUSINESS MEETING

1. Roll Call and Establishment of Quorum.
   a. Meeting was called to order at 6:10 pm. Roll was called and a quorum was established.

2. Open Forum
   a. Speaker: Gwen Winter presented her opinion on "waste to power," after seeing a plant near San Diego, used for fuel or fuel cell production. It is an alternative to present cycling of wastes. It can also be used to produce asphalt.

3. Approval of Draft Minutes of October 4, 2007 meeting.
   a. Minutes were approved unanimously after the correction of a typo on page two.

4. Discussion of Targets for Petroleum-Use Reduction.

   a. TFM Heinberg described the theory behind the Oil Depletion Protocol, which is based on ideas regarding the oil depletion rate (first calculated by physicist Al Bartlett and independently developed into the ODP by Colin Campbell, which he predicts has a rate of 2.5%).
      i. Based on ideas of sustainability
      ii. Rate of consumption should be reduced by the rate of depletion—the quantity used on an annual basis as a percentage of what remains.
      iii. When real scarcity arrives, society's dependence on that material has been largely reduced.
      iv. The Oil Depletion Protocol has been adopted by Portland, OR and the Post-Carbon Institute.
      v. Though we don't know the depletion rate for certain, world production probably will not drop more than 2.5% per year for the next ten years.

vi. We do know, however, that oil export is declining as producing countries use a larger proportion of their own production.
vii. Recent information, such as a report by Carbon Equity (http://www.carbonequity.info/PDFs/Arctic.pdf), suggest that a 2.5% reduction in consumption may not be enough to stave off adverse effects from fossil fuel consumption, but it is a start.
viii. Efficiency alone increases the vulnerability to oil shocks--- it can also lower the cost of a resource, potentially increasing consumption.

b. The Task Force discussed whether there should be across the board or per capita reduction as a target.
   i. TFM Heinberg noted that no jurisdiction has enforced oil reduction targets to-date.
   ii. Members stated that "enforcement" can feed back into better program implementation: it doesn't have to be punitive
   iii. TFM Bedsworth stated that there is no baseline data for calculating rates, and to implement such an effort monitoring would also be needed.
   iv. The public should get feedback regarding their changes in consumption patterns.
   v. Members suggested consideration of population change when calculating reduction target.
   vi. TFM Heinberg was asked to come up with actions that could help the city meet targets.

c. Task Force members put forward numerous ideas to achieve target goals.
   i. Prioritize actions from easiest to hardest to achieve
   ii. Some kind of rationing system
   iii. Personal energy audits/ web calculator
   iv. Competition between cities for the lowest consumption rates
   v. Fund students to develop methodology or monitoring
   vi. Hire city employee to oversee all of this
   vii. Financial awards for best savings performance with extra prize funds going to support staffing

d. 3% target
   i. Boundary issue for monitoring is challenging.
   ii. 3% should be rethought if they go with a per capita measure and if the TF wants a target that could be replicated in other places.
   iii. There was still unease regarding per capita vs across-the-board, but TFM Heinberg said that this may be the best choice for the municipal level.

e. Related Recommendations from Task Force members
   i. Efficiency measures will only decrease consumption for the short term
   ii. A principle recommendation should be for people to drive less.
   iii. Differentiate what individuals can do from what cities can do to enable their citizens
   iv. It should be stated that following the recommendations will make Oakland a more resilient place to live once changes have occurred.
   v. Burden should be on city to make sure individuals can take positive steps (like use transit)
   vi. Demonstrate that many of the recommendations are quantifiable (Task Force could show example of this with different options where data is available)

f. Summary of main strategies that have stood out in the discussion (conveyed by TFM Room):
    i. Promote urban village concept as a way to reduce oil consumption
    ii. Use Oil Depletion Protocal as a way to inform implementation
    iii. Create a monitoring system
    iv. Create an office that works on outreach
    v. Introduce measures that encourage people to drive less.

5. Discussion of Task Force Recommendations and the Final Action Plan Framework, Including its Format, Organization, Prioritization, and Content, and Development of Preamble/Introduction.

a. There was discussion regarding the appropriate tone for the document's introduction or executive summary.
    i. Several Task Force Members stated that the section should reflect the sense of urgency that they feel. Concrete examples, such as changes in gas prices, were suggested.
    ii. One suggestion was that the introduction note opportunities despite urgency of situation.

b. Executive Summary should indicate:
    i. how petroleum independence is distinct from global warming and yet related;
    ii. why we should care: magnitude of issue, how it will impact us, volatility, preparedness, uncertainty
    iii. a call to action
    iv. leadership potential
    v. data on energy volatility and resiliency
    vi. how individuals and city should work together
    vii. menu of options

c. Organization
    i. Task Force Members were interested in combining discussions of Land Use, Transportation
    ii. There was interest in using graphics
    iii. One proposal was to separate report into sections for: individuals, government, business, others, plus a context referring to what other branches of government are doing.
    iv. Another organizational proposal was to organize by working group focus area
    v. Further options were to "tell the story" first, then have proposed actions in each section or in an "action" section at the end, sorted by responsible party..
    vi. Five to ten priorities should be laid out (each TFM should put his/her list together for discussion)
    vii. The discussion concluded with interest in telling the story by topic, and put actions in the same section, separately for individuals, government, etc.:
        a) Part I—Land use and Transportation;
        b) Part II—Food, Materials, Waste, and Port;
        c) Part III--- City operations and education, a section on outreach/awareness, organization, city operations, and sustainability, which would help the city support or enable success.

d. Formatting and more organizational ideas
    i. Background, including philosophy and principles, suggestions for various roles and responsibilities (gov, individual, etc.)

ii. Focus on Oakland-actionable items, including advocacy role outside boundaries
iii. Divide into short (1 to 3 years), medium (3 to 6), and long (6 to 9year) term actions, without forgetting that some actions require years of engagement, though "adoption" could happen immediately. This could be shown graphically.
iv. Goals could be distinguished in a more qualitative sense: as being interim, incremental, radical, etc.
v. Portfolio of options could be laid out in executive summary.
vi. Clear definition needed for "green jobs".
vii. Prioritization of actions needs more fine-tuning as land use goals are seen as a package.
viii. A subgroup, up to four individuals, agreed to reorganize the outline discussed today.

6. Future Agenda Items.
   a. TFMs decided to have the next meeting on Nov. 8, provided room availability, and keep the meeting date for November 15.
   b. TFMs will work with same material, with information integrated from this meeting. Discussion will focus on how to use the ODP, prioritization, format and recommendations.

7. Announcements.
   a. Meeting materials should be submitted on Nov. 1 and Nov. 8 for the next two meetings

8. Adjournment.
   a. The meeting was adjourned at 9:00 p.m.

Continued Discussion (from October 18, 2007 Meeting) of Targets for Petroleum-Use Reduction.

Regarding the Oil Depletion Protocol, OIO Task Force Member Richard Heinberg will present, for discussion by the entire OIO Task Force, the importance of setting use-reduction targets and meeting them; and the Oil Depletion Protocol (ODP) as a sensible framework. The ODP simply sets the goal of reducing oil consumption by the annual depletion rate (the amount of oil used globally as a percentage of the amount left to extract) — which is a little less than 3 percent per year. Sustainability can only be achieved with regard to ANY non-renewable resource if the rate of consumption is declining by at least the annual depletion rate — so this is a general sustainability principle, there is nothing arbitrary about it.

Without a target for annual reduction, efforts such as ours will merely result in making usage of fuel more efficient, while total fuel consumption continues to grow. In that case, vulnerability to supply shocks actually INCREASES, because the slack in the system (inefficiency) has already been removed, while dependency has worsened. The only way for Oakland to reduce its vulnerability to supply shocks is to reduce its actual consumption of fuel (not just its inefficiency in the consumption of fuel).

The OIO Task Force will discuss the recommendation that the City of Oakland adopt the Oil Depletion Protocol as the basis for setting an annual target for reduction in petroleum consumption.

Continued Discussion (from October 18, 2007 Meeting) of Task Force Recommendations and the Final Action Plan Framework, Including its Format, Organization, Prioritization, and Content, and Development of Preamble/Introduction.

DRAFT

Oil Independent Oakland (OIO) By 2020 Task Force

Executive Summary

A Vision for an Oil Independent Oakland
Why Should We Be Concerned?

a. America's Oil Dependency
b. Problems of Oil Dependence
   A. Climate change
   B. Peak oil
   C. War
   D. Pollution
   E. Reinforces unhealthy economic patterns
c. Benefits of Oil Independence
   A. part of solution of most dire environment problems
   B. part of the solution to oil depletion
   C. creates green jobs and underlies new economy
   D. builds community and sense of place
d. What it could mean to Oakland
   A. Reduce economic risk
   B. Reduce contribution to environmental problems of all scales
   C. Create new green jobs
   D. Reduce crime
   E. Transform our city
   F. Make Oakland truly a model city

The globalized economy has bound us together in a web of mutual dependency this has both positive and negative impacts. Today the human race has better chances than ever before of solving the enormous challenges we face. When we look out over the globe, we can rejoice in several promising trends. Even so, here and there global developments continue to be unsustainable. The major “survival issues”, among others energy, pollution, and climate problems, call for far greater commitment and strong political and industrial leadership, at all levels of government.

Declining access to conventional oil, in combination with our joint responsibility to stop global warming, will be a test of society’s readiness to switch to energy systems that are more sustainable in the long term and provide economic benefit to all. Basically, it is a question of the will to show solidarity with present and future generations.

Oil depletion presents a unique set of vulnerabilities and risks. If policy makers fail to understand this, the resulting policies may leave society mired both in internal economic turmoil and external conflict caused by fuel shortages, to the point that the pursuit of international climate policies becomes much more difficult than is already the case. This would truly be a worst-case scenario.

Policy makers may assume that, in addressing the dilemma of global Climate Change, they are also doing what is needed to deal with the problem of dependence on depleting petroleum. This could be a dangerously misleading assumption. On the other hand, if nations were to try to mitigate the economic impacts of oil depletion by producing large amounts of synthetic petroleum from coal and other low-grade hydrocarbons, the climatic effects could be catastrophic.

Fossil fuels have delivered enormous economic benefits to modern societies, but we are now becoming aware of the burgeoning costs of our dependence on these fuels. The human community's central task for the coming decades must be the undoing of its dependence on oil, coal, and natural gas in order to deal with the twin crises of resource depletion and climate chaos. It is surely fair to say that fossil fuel dependency constitutes a systemic problem of a kind and scale that no society has ever had to address before. If we are to deal with this challenge successfully, we must engage in systemic thinking that leads to sustained, bold action.

One way to avert or ameliorate the impacts of Peak Oil would be to implement a citywide commitment to proactively, cooperatively reduce the use of oil (effectively, a reduction in *demand*) ahead of actual production declines. Setting a bold but realistic mandatory target for demand restraint would reduce price volatility, aid with preparation and planning, and reduce international competition for remaining supplies.

The Oil Depletion Protocol would set a target of about 2.5 percent reduction per year in oil consumption, but would not specify how nations might achieve this goal. In order to enlist public support for such efforts, governments would need to devote significant resources to public education campaigns. In addition, planning and substantial public investment would be needed in three critical areas: transportation & land-use, agriculture, and chemicals industries-this action plan's focus is primarily on transportation & land-use.

In this document, we propose a number of far-reaching, concrete measures that can end our dependence on oil by the year 2020 and tangibly reduce our use of oil products. Our ambitious objectives are as follows**....(need to do after full report is done)**

All this means that we can both reduce oil use and emissions of greenhouse gases. We can also secure our supply of energy, strengthen our economy and promote the development of sound growth driven by technology, planning, equity, and environmental balance.

In short: the phase-out of oil can further strengthen our position as one of the country's leading cities in sustainable development. However, our ambitions are not really new. They have a long previous history. And they will obviously need to be followed up and intensified in the decades following 2020.

List past successes.....(request from staff)

Naturally, efforts to make more efficient use of energy and the phasing out of both oil and other fossil energy carriers will need to continue for decades after 2020. This is connected above all with climate policy and the already existing objectives and requirements to reduce by 2050 emissions of greenhouse gases by 80 percent compared with 1990 levels of emissions as called for in AB32.

We want to be at the forefront in the gradual use of resource-efficient lifestyles and renewable technology – electric buses and street cars, urban villages, solar cells, universal transit access, and also technology we cannot know anything about yet or can just divine. We prepare for this type of development in our proposals by incentives for promoting less oil intensive transportation and land use planning as well as research, development and commercialization of new technology.

We would also like to underscore the need for partly new values and a way of life based to a greater extent on solidarity, at both national and individual levels. The role of homes and schools is therefore important, and we need to support the bearers of ideas, the popular movements, in their ambition to encourage new thinking and a deeper understanding of our world.

DRAFT

Proposed Outline of Final Report v1

Overview and Background

What was the Oil Independent Oakland Task Force?

a. Charter
   A. Mission and Members
   B. Similar efforts
b. Scope
c. Key Drivers of Oil Dependency
d. Classification and Prioritization Scheme/Approach
   i. Action Plan Chapters
      1. Land Use and Transportation
      2. Ports and Consumer Goods
      3. City Operations and Public Education
   ii. Sections with the Chapters
      1. Individual Actions
      2. City Government Actions
      3. Leadership Initiatives
   iii. Timing of Potential Actions
      1. Short Term-1-3 yrs
      2. Medium Term: 4-7 yrs
      3. Long Term: 8-12 yrs

Chapter 1
Reducing the Oil Intensity Through Transportation and Land Use or
DRIVE LESS

Introduction: Back to the Future

o Impact: Lower GHG emissions-More Resilient Communities

1. Post World War II dream- Cheap Cars and Cheap Oil
    a. Growth of Suburbia
    b. Decline of Inner Cities
    c. Mono Use zoning
    d. Two Car Family (SUV and Sedan)
    e. Drive a distance to work and shop. e.g. Get in car and Park to get a loaf of bread

2. Fallacy of Composition
    a. Sprawl
    b. No sense of community
    c. Car as status symbol
    d. Long Commutes
    e. Eats up land-Less open space and agricultural land
    f. Traffic Jams

3. The low carbon oil independent lifestyle
    a. Vibrant higher density communities
        i. Easy walk or street car ride to daily retail needs
        ii. Lively community appropriate shops and eateries
        iii. "Urban Nature"- communities near the edge of natural amenities such as waterfront and greenbelts
        iv. Oakland transit is nearby, safe and 'fun'
        v. Nearby public amenities, parks, and streetscapes
    b. Healthier residents and lifestyles
        i. Walking and biking encourage healthy lifestyles
        ii. Low carbon = sexy
        iii. Shorter commutes = more time with family
    c. Community character
        i. Families of range of incomes live in proximity
        ii. Unique community character
        iii. Greater sense of identify with community
        iv. Community eyes on the street means less crime
    d. Greater Resiliency
        i. Less of family income spent on cars and gas
        ii. Two car family
        iii. One hybrid for long trips and
        iv. One electric car, for shorter trips
        v. Bike or walk to work

Notes to incorporate somehow:

- Prior to 1940, the East Bay was serviced by the Key Route System
    - 185 Street Cars
    - 88 Electric Trains
- In 1946 GM, Standard Oil, and Firestone acquired 64% Ownership through a front company called National City Lines (NCL), with ownership of street cars in 45 US cities
- GM was found guilty in Anti-Trust Lawsuit, but the damage was done
- But…we inherit land use patterns influenced by the key route system

City Design is at the Core of the Issue

- The solution will take many forms, but urban design is at the root of high energy, especially petroleum use
- European Cities have street grids that formed before cars
  - Far less energy use per person, though similar automobile technologies are on the street
- Even in the US, in cites with older roots such as New York, energy use is 1/2 per capita that of LA.
- While alternative energy, better cars, and alternative fuels all have a role, they are more focused on the symptoms than the root of the problem

Listing of Recommended Actions for Transportation and Land Use

1. Urban Villages Mapping for GP Amendment
2. Zoning and Policy to bring "live", "shop" and "work" closer
3. Proactive Design Review Standards to make density *livable and vibrant*
4. Financing and Public Amenities to support a positive transportation hierarchy, and affordable access
5. Transfer of Development Rights to de-emphasize development in conservation areas
6. Improve coordination between land use/planning and transit
7. Promote public transport
8. Encourage transportation sharing
9. Disincentives for private autos
10. Promote less oil-intensive transport
11. A Model City Fleet

1. Urban Villages Mapping and General Plan Update

Existing Land Use and Transportation Element (LUTE) of the Oakland General Plan dates back to 1998 and is ripe for an update

Mapping can be used to help identify existing centers of vitality with *high density* and *high diversity* of land uses, to further an Urban Villages approach.

Must be coordinated with existing and planned transit

Recommendation: Planning should update 1998 LUTE of the General Plan by amendment

- Use GIS Mapping Tools to identify existing vitality nodes as priority areas for density development.
- Evaluate diversity of uses and plan to remedy shortfalls
- Coordinate with Short and Long Term Plans of AC Transit and BART, ABAG and MTC
- Needs community engagement for each area

1a Vitality centers… Aspects evaluated in diversity of use

(Insert chart of diversity evaluation areas)
1b AC Transit BRT and other plans (insert graphic)
1c BART Regional Rail Plan (insert graphic)
1d ABAG Focus Program

Recommendation: Amend General Plan (1998 LUTE), Taking into account:

- Urban Villages Mapping
- AC Transit BRT Plans
- BART Regional Rail Plans
- ABAG Focus Program
- Look at Vancouver Plan as one model
- http://www.vancouver.ca/engsvcs/transport/plan/index.htm

2. Zoning Policy to support general plan

2a) bring "live", "shop" and "work" closer

- Oakland has a general need to update zoning with general plan
- Updated tools may be needed for the toolbox
- The fundamental premise of zoning- sequestering use types- may be needed to be overhauled:

- Is there a need to separate "residential" areas from "polluting" "industrial" job centers in all cases?
- Economic Trends are towards jobs in new types of businesses
  - The job base is shifting towards much smaller businesses
  - The job base is shifting towards more service oriented business (rather than manufacturing)
  - At least some manufacturing can be "clean"
  - The above may be candidates for co-location of jobs with residential areas

- Urban Villages or Community Oriented Development (COD) to create *access by proximity, with a hybrid type of mixed use that* puts job centers near residential and retail to join all three legs of use diversity- live, shop, *and work*
  - Most current mixed use focuses on residential and retail components
  - Define environmental performance standards in a CEQA context, for types of job inducing, clean commercial/industrial uses that would be appropriate
  - Evaluate crime reducing benefits of high diversity of use, with active eyes on the street rather than a "ghost town" effect that ensues when workers go home at night from monolithic use areas.

- Coordinate with Mayor's Green Jobs and Land Use Task Force
- Eliminate uncertainty caused by speculation and difference in Zoning and General Plan
- Create specific development goals for job creating zoning
- "Specific Plans" may help add further definition
- Utilize North San Jose approach to planning for job creation
  - Designate some areas for no residential job creating opportunities (e.g. Oakland Army Base has existing no-residential Tidelands Trust restriction)
  - In some locations, use residential development to help fund job creation opportunities (where compatible) in a mixed use residential-commercial-industrial- retail environment
  - *Evaluate Oakland's own C-27 Zoning or similar zoning for Business Districts near residential*
  - *Evaluate North San Jose plan's focus on Jobs as current planning effort unfolds*
  - *Create certainty as to what city wants with General Plan, Specific Plan, and Zoning and let market respond*

2b. Zoning Policy Transit Village Planning Recommendations

- Evaluate BART Transit Oriented Development Guidelines for application to Oakland
- Evaluate-coordinate with Transit Village Planning Efforts currently underway in locations like San Jose/Santa Clara Transit Village

Matter of degree… is the focus on the Transit or the Community

(Insert graphic to illustrate difference in transit focus verses local community focus)

2c.) Zoning Policy: Parking

- Parking and traffic congestion is an important aspect of high density development
- In theory, high density and high use diversity should reduce auto usage, but, one of the major objections to high density development in Oakland is traffic and parking congestion
  - May be a short term issue as use diversity builds
  - E.G. New York City has low energy use per person and low car ownership. The density and use diversity is such that not owning a car is common
- Oakland City parking ratios are still in effect
- Market Risk: Even those attracted to "in town" living may not be ready to give up their cars. Thus lenders are reluctant as well
- Car free provisions for senior housing are considered realistic
- Parking ratio credits near transit may be more acceptable
- "Shuttle" solutions may help as well

- Movement within activity centers
- Movement to BART Stations
- Utilization of empty BART Parking at night
- May be street car system

2c. Parking Policy- Oakland 1961 Parking Policy example

- In 1961 Oakland adopted a new policy of requiring one parking space per dwelling unit for apartment buildings
- Brian Bertha- housing economist collected data for 45 projects prior to change and 19 projects after the change
- Results:
  - Cont cost went up
  - Investment in land, density, and land values went down
  - Rents went up, for larger, but fewer units

Variable	**Before**	**After**	**Change**	**% Change**
Const Cost ($/DU)	$6,613	$7,805	$1,192	+18%
Density (DU/Acre)	77.5	54	-23.5	-30%
Investment ($/Acre)	$513K	$421K	-92K	-18%
Land Value ($/Acre)	$217K	$145K	-$72K	-33%

2c. Parking Policy- San Francisco For-Sale Example

- SF requires one off-street space for each new dwelling unit
- Wenya Jia and Martin Wachs at UC Berkeley studied conflict between affordable housing and parking availability in San Francisco (1998) through hedonic regression analysis
  - SFD without parking $348K
  - SFD with off-street parking space $395K
- Difference of $47K
- Translates to 24% less households able to buy a home when this difference was translated to income share for housing

2c. Parking- Electric Avenue Project with Car Share- In Vancouver

- 465 Unit Condominium Project in Vancouver
- Includes an On Site Car-Share program with 7 cars
  - Four Toyota Prius hybrids, a station wagon, a van and a pickup
  - Will be stored on site and available to condo owners who join up with the Co-operative Auto Network for interim use.
  - The fleet was carefully chosen to give users the widest possible usage, from simple car use to moving groups of passengers or bigger items.
- On Site program provides convenience and a critical mass of users for higher utilization
- Can realistically reduce parking ratios and car use

2c. Parking Recommendations

- Additional look at Don Shoup's Work at UCLA as background, the idea of subsidized bundled parking (embedded into overhead) rather true ala cart pricing
- Historical Impact of Oakland's Parking Ratio Requirement and extra parking cost on Housing Affordability
- Dan Zack's work in Redwood City as a Bay Area example of implementation of Market Rate Parking
- http://pedshed.net/?p=105
- Examine Applicability of "Car Free by contract" to Oakland on a pilot basis or for particular areas or types of uses
- Provide developer incentives to reduce parking ratios where parking can be unbundled and those not choosing parking can participate in onsite car share program-
  - Provides ready cadre of car share users in the same place to increase utilization
  - Cost savings from not choosing parking increases affordability

2d Car Ownership and Affordability in Vancouver

- Gordon Price of Vancouver translated the car ownership cost avoidance to housing affordability
- Canadian Automobile Association estimates that an average car costs $9,000 a year to own and maintain.
- Take that money to pay down a mortgage each year, and you can afford another $100,000 of home mortgage, assuming current interest rates.
- Individual savings would vary from these averages, but the savings is substantial
- Car share within a building or density node creates realistic alternative to care use and parking issues.
- Cars could be electric as well for short rang trips

2e. Zoning Policy- Retail Balance

- Lack of Retail Balance means more vehicle trips out of the city and greater Petroleum Dependence
- Oakland residents often leave Oakland for prime retail shopping. Conley consulting group found Oakland retail leakage includes:
  - $1 Billion/Year in Oakland Residents going outside Oakland
  - $10M loss in sales Tax revenue
  - About 10,000 potential retail jobs
  - Potential for about 5 Million SF of Space (new construction and construction jobs)

•An analysis of Oakland's tax base shows it to be highly dependent on residential parcel tax with lower sales tax ratios than comparable cities

- *Bakersfield 51%*
- *Concord 40 %*
- *Fresno 35 %*
- *Stockton 35 %*
- *San Diego 17 %*
- *Oakland 9%*

  - City's current focus through Conley Consulting Group is focusing on arterials of Broadway, 27th Street, and Valdez Street

2e) Retail Balance Policy Recommendations

- Look at both local serving retail and regional comparison shopping.
- Local Serving (how far do you have to go for a loaf of bread or a dry cleaner)
  - Ensure residential areas have a good mix close to residents rather than "mono-use" zones.
  - Use GIS mapping as planning tool
  - Reduce and shorten trips for daily/weekly items

- Walking distance to residential centers where possible
- Can encourage grocery stores that promote *local foods* as further means of oil independence

- Regional Comparison Shopping (do you have to drive to Walnut Creek for the latest fashion)
  - Give Priority to Transit Proximity
  - Consider Street car system as part of streetscapes to add mobility and charm
  - Require electric car charging stations as part of parking solution
  - Good for retailers: More resiliency to oil supply shocks

Zoning Policy- Retail Balance-Crime Aspect

- Fear of crime scares many retailers away
- Potential for *high diversity of use* to break the cycle
- More local retail reduces trips while high use diversity makes more eyes on the street

2f. Zoning Policy- Housing Balance

- A balance of housing that reflects the diversity of the workforce, means more people can live near where they work
- Creates greater resiliency to oil Supply Shocks
- Oakland Blue Ribbon Panel has studied affordable housing with recommendations still being considered by council:
  - For Market Rate projects over 20 units
    - First Two years 5% on site or 10% off site
    - Third Year 15% on site or 20% off site
    - In-Lieu fee option
    - Transfer Tax from first sale of market rate units would be used to support affordable housing
    - Focus of above is low income (below median)
  - City Redevelopment Agency contribution recommended to increase from current 25% (legal minimum is 20%) to
    - 35% in two years
    - 50 % within 5 years
    - Focus of the above is very low income

2f. Zoning Policy- Housing Balance

- Recommendations
- Use GIS Mapping to support planning location of high density (over 20) units in appropriate locations
- Especially for very low income housing controlled by RDA, ensure transit proximity as a priority in sitting to insulate the poorest among us from oil supply and price shocks
- Consider Car Share as an affordability measure with less cost towards parking for project and less income dedicated to car ownership.
- Consider workforce housing as part of RDA controlled housing (not necessarily low income) for people who need to work in city
  - Police and Fire- Community Building Aspects for public safety professionals to live within communities they serve
  - Teachers near schools
  - Would imply designating family rental units with portion of pay dedicated to rent while under Oakland or OUSD employment

2g. Social Equity Aspects

- More Jobs in Oakland
- More jobs closer
- Less dependence on the cost of a car in general
- Less dependence on a car to get to work

- Using the density and transit premiums as a means to create value that funds affordable or inclusionary housing requirements, out of land value premiums, not developer margins
  - across the board through zoning and general plan, to come out of land value premiums, not project specific!

2g. Social Equity-Public Participation and Redevelopment Aspect

- Many of the Activity Nodes and Transit Centers are located in redevelopment areas
- Ensure Transit Development is coordinated with RDA
- Ensure "Project Area" 5 year plans reflect transit as well as affordability requirements
- Ensure "Project Area Committee (PAC)" is used to define economic redevelopment and affordable housing objectives
- PAC is required in "Project Areas", but *may be* created for any "Project Area"
- Use this input to make as much of the RDA solicitation process competitive as possible, so developers compete for entitlement rights based on publicly defined goals
- Oakland has a huge portion of the city defined in RDA Project Areas (about 40%)
- Oakland has 3 Project Area Committees now formed

2h Financial Strategy

- Create and Capture Land Value Premiums with proactive across the board rather than reactive project specific approaches
  - Transit
  - Density
- Infrastructure Impact Fees
- Improvement Agreements
- Affordability requirements coordinated with RDA areas
- Transit Funds e.g. MTC
- RDA Tax Increment with investment strategy coordinated with 5 year plans with Citizen input through Project Area Committees (whether required by eminent domain or not)

3. <u>Proactive Design Review Guidelines for Buildings and Streetscape to Make Density Vibrant and Livable</u>

- Redwood City may provide a good Bay Area Example with their Downtown Precise Plan (ABAG)
  - <u>http://www.redwoodcity.org/cds/planning/precise/preciseplan.html</u>

- AIA confirms willingness to participate (with lead time for time-off coordination)
- Areas to address:
  - Large monolithic structures are a major source of objection to density
  - Proactive guidelines important to all parties to reduce disruption at the end of the process
  - Needs to address major areas of concern
    - Importance of transition from high density to lower densities area and looking at building elevations from all four sides in transition areas
    - Flexible ground floor story
    - Incorporating solar power to create more renewable electric capacity on the grid, especially as electric cars and transit become more prevalent.
    - Aesthetic, livable, vibrant
    - Recommendation: Oakland Planning Needs to create a process to review and update existing HD DR guidelines, similar to the process convened in 2005 for design review guidelines for 1 and 2 family residences. Get examples of guidelines from other cites that work well, e.g.Portland, Vancouver

4. Financing and Public Amenities to support a positive transportation hierarchy, and affordable access

- Some aspects are within the City of Oakland's control such as streetscapes, bike racks and paths and street furniture.
- Improve Mechanisms for funding within city
- "Improvement Agreements" and
- "Development Impact Fees"
- Land Value Premiums from Density and Transit Proximity may help fund above items
- Redevelopment funds where appropriate
- Coordinate with outside funding sources such as MTC
- Create a vision
- Create a set of standards for streetscape furniture etc consistent with streetscape plan and with cohesive appearance
- Create examples of infrastructure we'd like to see that could be included in improvement agreements. Bus loading stations, bike racks, benches, electric car charging stations (doubles effective range of electric cars) self charging street lights with vertical turbines, street light timer/dimmers for dawn and dusk, potential for turbines in parks.

Insert chart with Example Transportation-Land Use Hierarchy below

- Walking- Facilitated by development with "access by proximity" in urban villages, Community Oriented Development (COD), putting jobs and shopping near home, with high diversity of use. Big health benefits.
- Bicycling
- Electric Scooters, and Carts- Facilitated by development with access by proximity in Urban Villages, COD
- Bus Rapid Transit (BRT) - high density along linear "centers" -high rider ship and high density complement each other over time.
- Mass Transit- facilitated by Transit Oriented Development (TOD), efficient public transportation between high density nodes, that is not necessarily high diversity.
- Electric Cars- a more efficient way to use the existing road network. Limited range implies shorter trips which is a good thing. Range can be doubled by infrastructure that includes charging stations.
- Plug in hybrids that have an *electric drive train,* with a fueled generator to extend range.
- Plug in hybrids that have a *fuel drive train*, with batteries and electric assist motors.
- Alternative Fuels Vehicles, Hybrids.
- Petroleum Fueled Cars-least preferred option in terms of energy and petroleum independence

4. A Street Car named….

- Since the BART-AC Transit System leaves a gap in the need for local transit, within nodes, consider an Oakland City Run System Based on Street Cars
- Street cars are shown to have higher rider ship- thus higher revenue potential
- Land Values have shown to be increased significantly by street car installation.
- Evaluate if
- private investment capturing land value premium could finance capital costs leveraging street car "charm", and
- fares cover operating costs
- Oakland Street Car Branding, style, color, graphics etc
- Could be built in Oakland- jobs
- Evaluate Key Route System to see where it could be still feasible
- Bordeaux France provides example of street car implementation without overhead electric lines overcoming a frequent objection- electrical cables can safely be placed in street to avoid objection to overhead lines
- Can dedicated BRT lanes be a first step to street cars?

5. Transfer of Development Rights (TDR)
   - A means to conserve some areas (or discourage development) by transferring rights to more desirable location.
   - The "de-development areas" would generally be those farthest from the centers and those preventing the restoration of important natural elements like creeks and those where expansion of community gardens, parks and sports areas are needed.
   - Existing Oakland TDR Ordinance requires contiguous property
   - In Redevelopment Areas TDR may be used in conjunction with or in place of eminent domain proceedings, for voluntary transfers
   - Recommendation: Council Modify existing Oakland TDR ordinance changing contiguous requirement

(Insert graphics showing local TDR application to preserve a natural feature like a creek, and broad application city wide.)

6. Transit & Infrastructure Coordination Recommendations

6a.The city may act in an advocacy or coordination role with agencies such as BART, AC Transit, CALTRANS or others.

- ✓ *Weigh-in with State in an advocacy role about how Prop 1 bonds funds will be directed to either encourage sprawl or encourage efficient transit. (i.e.. Fourth Bore)*

6b. Specific Regional Coordination Areas:
- Advocate Better "one fare" system
- Advocate infrastructure for bus loading stations
- Advocate AC Transit provide the "ribs" that feed into the "spine" of BRT and BART.
- Advocate AC Transit provide shuttle type services within activity nodes (urban villages) and to BART using excess BART parking at night where feasible
- Coordinate Transit Plans with City Infrastructure Plans
- Better Coordination Between Regional Transit Agencies and Oakland Land Use Planning Efforts-mentioned by AC Transit and BART
  - Coordination on Priority Traffic Signaling for AC Transit could increase service by 1/3.
  - Potential for Joint Powers Authority to streamline Transit Village development
  - Designate specific transit coordination responsibilities within Oakland Planning Staff
  - Coordination of Land Use and Infrastructure with AC Transit and BART future Plans

6c. ABAG coordination Recommendations
- Fully Engage in FOCUS Program to identify Priority Development Areas
- Examine options for more focused nodes
- Leverage MTC involvement for funding
- Look at both priority development areas and *priority conservation* areas
  - Potential to use City TDR as a tool for the conservation side of Regional Program

6d. Some Specific Geographic Coordination Areas, for AC Transit and BART (Insert graphics for each proposed BRT location)

BRT Coordination
- ✓ Telegraph at 49th
- ✓ Telegraph at 31st
- ✓ International at 34th - Current

6e Respond to AC Transit Initial Thoughts for Other Transit Priority Locations

- 20th Street between SP and Harrison (where AC just spent $4 million to fix the street between Telegraph and Broadway)
- Broadway between 2nd and Grand
- 11/12th between MLK and Oak
- 8th OR 7th between Oak and MLK
- W Grand between Toll Plaza and SP Avenue

6f. Coordinate with BART Regional Rail and Transit Village Projects in Oakland

Short Term

- Corridor Preservation – Oakland Subdivision
- Increase frequency of Capitol Corridor
- Port of Oakland Intermodal Facility and 7th Street Grade Separation
-

Medium and Long Term

- BART implements Metro vision and 30-year CIP
- Fourth Track in Downtown Oakland
- West Oakland Capitol Corridor Station
- Potential new Transbay Rail / BART Crossing with HSR station at West Oakland BART and train yard in Oakland

BART Transit Village Sites (format table and insert graphics)

Station	Status	Development Status	Project Value
Fruitvale (Phase I)	Completed	47 rental units, 135,000 sf (37,000 retail, 27,000 office, 71,000 public)	$100 M
Fruitvale (Phase II)	Approved	278-425 units	$130-190 M
MacArthur	Negotiations CEQA	675 units, 34,000 sf retail, 5,000 sf community space	$350 M
West Oakland	Negotiations	1. West Oakland Alliance 2. McGrath Properties	$73 M (both projects)
Coliseum	Negotiations	Oakland Economic Development Corporation and MacFarlane Partners	$341 M (BART land)

7. Promote Public Transport
    1. Expand public transit
        a. Bus Rapid Transit (BRT) and Street Cars
        b. Explore municipal streetcar system
            i. Oakland's Key and other historical streetcar systems
            ii. Work with public transit entrepreneurs and the public
            iii. Explore possibility of free transit system
        c. High Speed Rail
        d. Work with regional transit agencies
            i. Expanded public transit in Oakland
            ii. One-fare for all transit options
    2. Increase walking
        a. Support the Pedestrian master plan
        b. Supplementary initiatives to educate and encourage walking
    3. Increase bike usage in Oakland
        a. Support the approval and implementation of Bike master plan
        b. Supplementary initiative to educate and encourage bike usage
    4. Universal Transit Access (UTA)
        a. City employees transit passes
        b. Employee transit pass programs
        c. Low income and public housing transit pass programs
        d. Student transit pass programs
    5. Public transport education
        a. Your travel choices matter outreach campaign
        b. TravelChoice (grant funded TALC program). Program to educate and inform households on public transportation options. Put online.

8. Encourage Transport Sharing
    1. Support expanding car sharing, beginning with city staff and car sharing parking place management. Use car share services in lieu of city vehicles.
    2. Support dynamic ride sharing with online, telephone, and mobile phone access
    3. Expand car pooling – incentives, adding online and telephone support infrastructure, organization and coordination. *[NOTE: Is this something we should recommend given that it can undermine public transport]*
    4. Bike sharing

9. Disincentives for Private Autos
    1. Support existing initiatives such as regional congestion charging
    2. Increase the cost of driving
        a. Local carbon or gas tax (Berkeley, http://www.ilsr.org/ecotax/greentax.html)
        b. Higher parking fees (MTC 's parking toolbox in Great Communities Collaborative)
    3. Less Parking in new developments funding public transportation
    4. Reduce city-subsidized parking and car allowances

10. Promote less oil-intensive transport
    1. City EV procurement and leasing
    2. Plug-in hybrid purchase and infrastructure development for EV cars
    3. Promote Alternative Fuels
        a. Encourage reclamation of waste oil for biodiesel production
        b. Support development of alternative fueling stations
    4. Enforce existing traffic laws (e.g., speed limits)
    5. Enforce existing anti-idling laws
    6. Driver education on vehicle maintenance (e.g., proper tire inflation and tune-ups) to improve vehicle efficiency.

7. Explore potential for traffic calming. Safe Routes to School (TALC program, piloted in Marin). 25% of morning driving is to school. Requires coordination with Public safety and public works department. Worked with Peralta in North Oakland. One example might be the Walking School Bus.

11. A Model City Fleet
    1. Reduce the size of city fleets through partnerships with car share groups (e.g., Zipcar or City CarShare)
    2. Biodiesel use in city diesel vehicles (B20 as a starting point, with exploration of the potential for higher blends). Priority should be given to locally-produced biodiesel from waste oil.
    3. Require best in class purchasing for city fleet vehicles, with priority given to electric vehicles as appropriate (e.g., parking enforcement vehicles).

Ports and Consumer Goods

Overview of the Port of Oakland

The Port of Oakland is a major economic feature of the city of Oakland. The Port directly provides 60,000 jobs locally and 700,000 in the region. The Port of Oakland supports billions of dollars in economic activity each year, and indirectly generates significant state and local tax revenues for the City of Oakland.[1] The Port of Oakland has 8 marine terminals, (between 50 to 150 acres in size), 20 berths and 2 railroads leading up to it. Oakland brings in 8% of California's cargo imports while Long Beach and Los Angeles bring in the majority at 89% (the remaining 3% come from other CA ports).[1]

- *NOTE: Potential for localization strategies for manufacture or materials reprocessing. One way to reduce the oil use is to modify the current "model"-globalization uses oil localization uses less there is still economic growth.*

Key structural, political, and economic factors

Competition with other ports is a major consideration for any decision: Competition between the Port of Oakland and other major ports facing the Pacific (such as Los Angeles/Long Beach, Portland, and Seattle) is of major strategic importance. Port officials and operators consistently raise concerns about competition in response to proposed environmental policy changes related to fossil fuel consumption and air quality. They argue that regulations and policy changes should be enforced nationally and internationally to avoid adversely affecting the economic competitiveness of the Port of Oakland. Otherwise, they argue, higher costs at the Port of Oakland will cause companies to re-direct their cargo down south to LA or up north to Seattle, taking business away from the Port of Oakland.

- *NOTE: Cite the BMP and initiatives (listed at end) from the other ports as motivator. Oakland Port will not be 'forging' new territory they are just catching up.*

The Port is mostly a landlord, not an actual operator of goods movement activities: While the vast majority of activity on the Port involves the movement of people (aviation operations) and goods (maritime and aviation operations), those activities are for the most part carried out by "tenants" of the Port of Oakland, which acts primarily as "landlord." While it is possible for the Port to exert some influence over how those tenants operate, the influence is not nearly as direct as many may think. The Port can establish conditions for leasing Port facilities, but is not directly in charge of the daily operations that take place on the land. Private companies set their own standards of operations for their ships, trucks or trains within the guidelines of state and national regulations. The Port of Oakland provides the facilities and equipment for the Marine Terminal Operators to maintain. It is important to acknowledge the complexity of the landlord/tenant reality while at the same time not allowing that arrangement to become an excuse for failures to act on systemic problems, failures to plan adequately for the future, or failures to act on behalf of other major Port stakeholders (such as local community residents and the workforce at the Port).

NOTES:

- *Conditions in leases per LA model.*
- *Education/Workshops for tenants paid for by Port revenue (public goods funds).*
- *As landlord are there incentives for local economy building businesses.*

Controversy around the Port's fossil fuel consumption is largely centered on local/regional air quality and public health impacts, not economic vulnerabilities or global climate change: It is important to note that the problem most heavily associated with oil consumption at the Port is negative health impacts from oil-based air pollution. This has resulted in problem statements and solutions that are primarily geared toward mitigating health impacts. For instance, the Port of Oakland is

[1] Meeting July 30, 2007. Port of Oakland Meeting at the Port of Oakland Offices.

implementing new "cold-ironing" technology that relies on electricity generated from natural gas, as a way to reduce local combustion of bunker and diesel fuels. Switching to natural gas is more effective as a public health solution, and less effective in addressing "peak oil/natural gas" and global climate change problems. Studies conducted related to oil consumption at the Port are more geared toward measuring health risks from pollution, and are less geared toward establishing baselines of fossil fuel consumption or greenhouse gas emissions.

- *NOTE: Potential for using community health impacts as a lever.*

The Port of Oakland is in the midst of major growth and expansion: Several years ago, the Port of Oakland initiated a major, multi-year expansion plan which is still underway. Container traffic at the Port is expected to increase by huge percentages in the decades to come.

- *NOTE: The underlying assumption is that globalization is going to grow. An alternative approach is building local economy.*

A unique labor and community agreement exists to govern the Port's expansion: When the Port's expansion plan was first put in place, it was the subject of a major negotiation between the Port, labor unions, and community groups. The result of that negotiation was the establishment of the Maritime and Aviation Project Labor Agreement, or MAPLA. This agreement ensures that the expansion of the Port results in some benefits for community stakeholders and labor unions.

- *NOTE: Potential that local labor groups would want to have manufacturing jobs grow in the region through local economy models.*

<u>Potential Recommendations</u>

- Implement Environmental Management System
- Voluntary Tenant Environmental Awareness Training
- Create Green Task Force
- Goal: Expand percentage of cargo transported by rail with % goal.
- Electrification of Port Cranes
- Some tenants to install Electric of Gates, Relocate Gates, and Extend Gate Hours – to reduce truck waiting/idling time
- Replace diesel powered fork lifts with either propane or electric
- New leases with tenants must include green agenda
- Green Flag Program -
  - Voluntary (with incentives such as lower dockage fees) programs requiring ships to slow to 12 knots at distance of 20 miles from shore. Traveling at lower speeds reduces emissions. To date, 60% of ships have joined program.
  - Incentives for ships that use low-sulfur diesel
- Cold Ironing – Goal of providing shore-side electrical power for all terminals
- Comprehensive Air Quality Plan
  - Retrofit Heavy Duty Vehicles with Diesel Oxidation Catalysts (DOCs) or Diesel Particulate Filters (DPFs)
  - Beginning in 2008 all non-maintenance dredging must be conducted with electric equipment
  - Yard Modernization – Retrofit yard tractors to meet emissions standards; container handling equipment equipped with exhaust controls
  - Modernization of PHL locomotives – use of LNG switchers, idle limiting devices, cleaner fuel
  - Truck traffic - considering incentives for commercial truck owners to upgrade truck to more modern clean fuel / fuel efficient trucks; institute measures to reduce idling time
- Institute ‘green building’ in all new construction and retrofits (tenant improvements?)

- Alternative Marine Power (AMP):
  The major AMP technique is 'cold-ironing', which is the practice of plugging into an electrical source while docked. The South Coast Air Quality Management District estimates this practice can reduce pollution by 2/3 if source of electricity is coal-fired plant, and up to 100% if renewable source is used.

- Switch to cleaner fuels:
  - Low-sulfur fuels: Cruise ships – Seattle and San Francisco
  - Recently announced plan by the International Marine Organization (IMO) sets international standards for reductions in nitrous and sulfur emissions
  - Biodiesel: NOAA Great Lakes research initiative
  - Natural gas: Long Beach – EPA grant to retrofit for yard hostlers (small trucks at cargo terminal)

- Upgrade/Retrofit Equipment:
  A wide variety of engines are used at dockside to unload and handle containers. Replace with electric, low emission engines; equip with diesel oxidation catalysts, idle limiters:
  - Yard equipment: cranes, forklifts (Los Angeles, Long Beach, Seattle)
  - Short-haul trucks (Long Beach: diesel oxidation catalysts)
  - Locomotives (Long Beach: idle limiters)

- Miscellaneous: Infrastructure changes:
  - Greater use of rail, bring tracks closer to dock (New York/New Jersey)
  - Modify gates (computerize, switch to electric) to reduce fuel use and truck waiting time (New York/New Jersey)

Consumer Goods

The Task Force came to the realization early in its deliberations that Food and Materials are two important areas of dependency and vulnerability for Oakland with regard to petroleum. However, due to time and personnel limitations, the Task Force realized it would be impossible to focus as much attention on these subjects as on transportation and related issues such as land use, which together account for the substantial majority of Oakland's oil consumption. Therefore, we decided to include the following general overview, with the recommendation that further studies of economic and societal vulnerability from future oil supply problems for food and materials, and more detailed suggestions for reducing those vulnerabilities, be pursued further at a later date.

Food

Conventional industrial agriculture is entirely dependent on fossil fuels. Artificial ammonia-based nitrogenous fertilizers use natural gas and atmospheric nitrogen as raw materials. Much of the world's cropland has been so chemically exhausted, its topsoil so weathered and destroyed that, without these artificial fertilizers (or extensive work to rebuild the topsoil), and it cannot produce crops in the volume or at the pace that the world's population now requires. The use of farm machinery impelled by internal-combustion engines, which run on petroleum products, has freed up millions of acres of cropland from the need to grow feed for draft animals; those acres now grow food for the burgeoning human population. Without oil, farming may again require animal power, and traction animals will need to be fed. Farms always attract pests; however, the growing of monocrops, which is made economically necessary by mechanization, attracts huge numbers of insect pests. Oil provides the feedstock for making the cheap pesticides used to control these swarms of pests and to maintain crop yields.
As a result of all of this, approximately ten calories of fossil fuel energy are currently needed to produce one calorie of food energy in conventional American agriculture. (Pimentel…)
With the global proliferation of the industrial-chemical agriculture system, the products of that system are now also traded globally, enabling regions to support human populations larger than local resources alone could support. Those systems of global distribution and trade also rely on oil. Within the US, the

mean distance for food transport is now estimated at 1,546 miles, though this distance varies greatly depending on the food item—233 miles is the average for pumpkins, 2095 miles for broccoli (Pirog et al 2001).

Oakland's situation is typical of that of modern cities: most food is imported from elsewhere, and most of that food is grown using prevailing fossil-fuel intensive methods.

Again, this implies a critical vulnerability for the people of Oakland. The Task Force therefore strongly recommends (1) maximizing local production of food in order to reduce the vulnerability implied by a fossil-fuel based food delivery system; and (2) promoting forms of agriculture that rely on fewer fossil-fuel inputs. While efforts along these lines require support at the Federal and State levels, some local polices could be extremely helpful:

- Promote Farmers' Markets and CSAs (community-supported agriculture) in any way possible.
- Promote gardening, including community gardens, rooftop gardens, and school gardens
- Favor local and organic production over conventional food for school food programs and other purposes that are under the control or influence of the City government.

Oakland is already pursuing such efforts as a result of Resolution #79680 C.M.S., (December 2005), in which the City Council authorized the Mayor's Office of Sustainability to develop an Oakland food policy and to plan for thirty percent local area food production. As a consequence of that Resolution, UC Berkeley graduate students Serena Unger and Heather Wooten conducted the Oakland Food System Assessment, which is available online at http://oaklandfoodsystem.pbwiki.com/.
Since these efforts were initiated in response to concerns somewhat different from those motivating the work of this Task Force, further study is warranted to determine whether additional strategies are required to ensure food security for the citizens of Oakland in an increasingly oil-constrained world.

Plastics and Chemicals

About 5% of oil consumed in the US annually (about 1 million barrels per day) goes into the making of plastics and chemicals. While this is a small proportion of the total oil consumed, it is crucial to the American economy.

Petrochemicals are made by "cracking" oil, a process of breaking hydrocarbon molecules apart with intense heat and sometimes a chemical catalyst, and are the raw materials for an uncountable number of materials both frivolous and essential. Some of the more common petrochemical building blocks of our industrial world are ethylene, propylene, and butadiene. Further processing of just these three chemicals produces products as common, diverse, and important as disinfectants, solvents, antifreezes, coolants, lubricants, heat transfer fluids, and of course plastics.

One of the most important petrochemicals, ethylene, can polymerize into polyethylene, a plastic used to make everything from toys to food containers and furniture. Ethylene can also react with chlorine to produce ethylene chloride, which can then be used to produce vinyl chloride, or its polymerized form, polyvinyl chloride (commonly known as PVC or vinyl), another important plastic. PVC is used in everything from building construction materials to clothing to toys.

Clearly, future oil supply problems will affect the entire chain of industrial products that incorporate these chemicals. The citizens and economy of Oakland will obviously be impacted, and it is difficult to imagine a scenario in which that impact could be entirely eliminated absent policies and practices implemented globally and nationally. Nevertheless, there are things that Oakland could do to reduce its vulnerability to these economic consequences of oil depletion.

Needed policies and practices must focus on two strategies: (1) identifying alternative materials made from renewable sources to replace petrochemicals; and (2) devising strategies to reduce the amount of materials required and consumed.

Plastics and other products now composed of petrochemicals can be made from corn, hemp, and other crops. A few companies such as NatureWorks (a division of Cargill) and Dow Chemical are actively pursuing such alternatives.

From the standpoint of consumers, it would be a tragic mistake for the industry to postpone making the lengthy and costly transition to alternative feedstocks until forced to do so by rising oil prices and shortages. In that case, entire supply chains might be disrupted, causing costs for products of all kinds to rise precipitously. Instead, the shift must be proactive, encouraged through corporate and government policy. As one example: last year, WalMart announced its intention to use biorenewable materials for all of its packaging.

Research into and development of alternative materials could provide Oakland with an opportunity for jobs growth.

The replacement of petrochemical-based materials with renewable alternatives is not without problems, however. To replace the entire stream of plastics and other oil-based materials in the US economy with crop-based materials would further strain an agricultural system already stressed by the increasing mandate to produce biofuels in addition to food. Moreover, many chemical processes that incorporate renewable feedstocks are energy-intensive, which means that the expansion of those processes would entail increased energy consumption.

Therefore the second strategy, finding ways to use less, will be of even greater importance in the long run. In the opinion of the Task Force, the banning of the use of plastic bags in Oakland represents a good first step in this direction.

Road Materials

One of the two most important road-paving materials is asphalt (the other is cement, a natural gas dependent material), which is a low-grade component of petroleum. As higher grades of oil will likely tend to be used preferentially during the coming years, it is unlikely that asphalt prices will rise as high or as quickly as those for light-sweet crude. Nevertheless, prices for conventional road materials will escalate substantially, making road building and road repairs more problematic as time goes on.
The following are recent figures for oil-based materials usage for road building and repairs in Oakland, as supplied by the Public Works Agency.

Oil Based Materials Usage, in Tons For The City of Oakland, 2002 – 2007

Description	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	TOTAL
Asphalt Concrete (AC)- CIP Overlays	30,098	17,165	42,377	10,205	14,032	**113,877**
AC for Pothole crew	2,400	2,400	2,400	2,400	2,400	**12,000**
AC for Base Repair/Speed Bumps	5,000	5,000	5,000	5,000	5,000	**25,000**
Rubberized AC	24,869	17,388	12,850	0	0	**55,107**
Cold Patch AC	112	90	90	135	158	**5858**
Slurry Seal	127	180	0	0	0	**307**
Parks, Streetscape, and Sewer	6709	8174	6508	6242	6,000	**33,633**

TOTAL	**69,315**	**50,397**	**69,225**	**23,982**	**27,590**	**240,509**

NOTE: In FY04-05, the Public Works Agency began the Street Resurfacing ACTIA Project, which accounts for the higher AC Overlay quantities.

The Task Force recommends that the City of Oakland investigate alternative materials for these purposes. One promising possibility is a material made from clay mixed with alkaline chemicals, which is being used increasingly in Zambia and other African nations. According to one report, the new material, besides being environmentally friendly, is both cheaper and more durable than conventional asphalt. (see http://allafrica.com/stories/200706220926.html)

City Operations and Public Education

1. Binding resolution to pass the Oil Independence Implementation Resolution which resolves that Oakland become the first government adoptee of the Oil Depletion Protocol and thereby obligated to reduce oil consumption by 3% per year. And that Oakland assess a local carbon tax set to the rate needed to yield the mandated 3% oil consumption reduction per year with the revenues funding Oakland's energy independence activities as recommended. The actual carbon tax rate will be adjusted on an annual basis to maximize the likelihood of achieving annual oil consumption reductions of at least 3% at the lowest net cost to society as determined by a panel of experts.
2. Create Office of Energy Sustainability
    a. Manage oil independence and carbon emissions reduction efforts
    b. Explore various options for funding oil independence initiatives including grants, selling offsets, taxes and fees, etc
3. Develop information system to monitor & model oil and energy consumption
4. "Your Choices Matter" Public awareness campaign
    a. Web site and hot line
    b. Outreach to stakeholder groups
    c. Urban villages education and outreach
    d. Open space neighborhood meetings
5. City staff awareness campaign (*NOTE: Discuss suggestions on sub topics?)*
6. Outreach to large employers in Oakland to develop programs to reduce oil consumption
    a. Educate about/encourage flex time models and compressed work weeks
    b. Develop model programs for employers (e.g., model ordinances)
    c. Provide incentives for trip tracking and reduction
    d. Educate employers on opportunities for waste minimization, renewable energy use, clean fleet purchases, etc.
7. Contingency Planning
    a. Require contingency planning for oil price and availability shocks by new development, municipal and regional agencies, and large employers
    b. Municipal contingency plan that addresses a 7 day fuel outage as well as a slow creep in prices
8. Support Community Choice Aggregation *(NOTE: Discuss actual impact of CCA between now and 2020)*
9. Support Green Jobs Corps
    a. Work with Community Colleges
    b. Conversion of gas to electric vehicles
10. Take an active role in supporting national and state laws and regulations that will reduce oil consumption (e.g., feebates, zero-emission vehicles, climate change rules, carbon taxes, etc.)

[END OF AGENDA]