

Clean, Green Obama Energy Basket: Bbrg.UBS_OBEN

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■ A political catalyst for the clean, green energy theme

We believe Barack Obama's presidential victory will shift national priorities toward making the US economy cleaner and greener. We believe the economic slump creates a near-term opportunity to push this agenda aggressively. Obama's fiscal stimulus package will likely make major investments in energy efficiency, mass transit, renewable energy, and smart electricity grids. In 2009, federal spending should grow 5.0% (Q4/Q4) versus just 0.5% for overall real GDP. Also, major regulatory changes will drive private investment in clean, green energy. Under Obama, the EPA will likely regulate carbon emissions far more aggressively than under President Bush.

■ Nineteen clean, green Obama energy stocks

We expect the Obama administration's policies to be broadly positive for these companies, which are already benefiting from the global shift to clean energy. The 2009 stimulus package will provide incremental revenue to some of these companies, at a time when the private economy is weak and many companies are posting disappointing results.

■ Who loses?

Consumers' real incomes will likely be squeezed by the shift to cleaner but costlier energy. This is just one more structural negative for consumer cyclicals; we reiterate our underweight on the sector. Electricity-intensive industries could be hurt somewhat by higher input costs, if they lack pricing power.

Table 1: Clean, Green Obama Energy Basket

Name	Ticker	Rating	Name	Ticker	Rating
Thermo Fisher	TMO	Buy	United Technologies	UTX	Buy
PerkinElmer	PKI	Buy	Union Pacific	UNP	Buy
XTO Energy Corp.	XTO	Buy	CSX	CSX	Buy
Anadarko Petroleum	APC	Buy	Monsanto	MON	Buy
Questar	STR	Buy	Potash Corporation	POT	Buy
Cooper Industries	CBE	Buy	Praxair	PX	Buy
Itron Inc.	ITRI	Neutral	Entergy	ETR	Buy
Cummins Engine	CMI	Buy	Applied Materials	AMAT	Buy
Fluor	FLR	Buy	First Solar	FSLR	Buy
AECOM Technology	ACM	Buy			

Source: UBS

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Clean, Green Obama Energy Basket

Barack Obama's impressive victory in the presidential election is likely to significantly shift national priorities toward making the US economy cleaner and greener. As we have detailed in previous reports, this worldwide trend is already under way, driven by rising energy costs and concerns about global warming. However, we expect the Obama administration will give the theme a new urgency as it pursues five broad policies, some of which will likely be advanced by the fiscal stimulus package to be unveiled early next year:

- Set ambitious goals for **reducing carbon emissions**, and work with other (particularly Asian) nations to make sure gains in the US and Europe are not negated by rising emissions elsewhere on the planet.
- Substantially **increase energy efficiency**, because less fuel means fewer emissions. This is less risky than, for example, developing an alternative fuel that may have "unintended side effects," like ethanol (higher food prices and deforestation).
- **Use cleaner fuels**—less coal and petroleum and more natural gas, nuclear, and alternative fuels.
- **Reduce emissions of conventional plants** by, for example, installing scrubbers and clean coal technology in coal-fired power plants.
- **Strive for "energy independence,"** to improve US energy security (both economic and military) and cut the income of unfriendly petro-powers.

If all these goals were achieved, the United States would score a nifty trifecta—a cleaner environment, energy-efficient economy, and greater national security. Next year's fiscal stimulus package (which is likely to be a major focus of the Obama administration in its early days) will provide funding for some of these initiatives. As UBS SRI Analyst Julie Hudson notes, "The Obama-Biden plan—energy efficiency, redistributive policies to alleviate fuel poverty, new energy technology, and carbon trading—appears to be designed to address issues raised by the credit crunch, as well as climate change, at the same time."

Trifecta: clean environment, energy-efficient economy, national security

Risks

Fossil fuels are popular because they are cheap. Shifting to more costly alternative fuels will likely pressure Americans' real incomes while reducing the global competitiveness of certain US industries, especially with respect to nations that continue to use coal. This will kill some high-wage manufacturing jobs. The federal government, under both Republicans and Democrats, has a poor track record of micro-managing commodity markets, as demonstrated by costly US farm subsidies, the failures of energy policy in the 1970s, and the recent experience with ethanol. The political/regulatory process has difficulty efficiently calibrating and equilibrating supply and demand on a continuous basis. Higher energy costs and lost manufacturing jobs are broadly negative for US consumers.

A counter-argument is that the US has significant opportunities to save energy without depressing living standards, if systematic energy-saving investments are made. Meanwhile, the cost of alternative energy will decline as technology improves and economies of scale are achieved.

Obama's Cleaner, Greener Energy Plan

The Obama-Biden campaign website lays out the candidates' energy plan in considerable detail. Here are 14 agenda items that convey the main contours of their plan:

Obama-Biden: 14 proposals

- **Implement cap and trade program to reduce greenhouse gas emissions**, in order to “cut emissions 80% below 1990 levels by 2050.” Importantly, their plan “will require all pollution credits to be auctioned”—i.e., no firm is given pollution credits. This would hurt businesses with high emissions (e.g., coal-fired electric utilities) because they will need to spend heavily on permits and may be undercut by cleaner competitors. It is also negative for electricity-intensive companies. Cap and trade could generate substantial revenue of which Obama would spend \$15 billion per year on developing clean energy, biofuels, and clean energy vehicles, with the rest returned to tax payers.
- **Make the US a leader on climate change.** “While it is time for America to lead, developing nations like China and Brazil must not be far behind in making their own binding commitments. Obama and Biden will engage in vigorous diplomacy to bring this about.” (It will be politically difficult to severely impede new coal-fired electricity generation in the US when China—as Obama has pointed out—is building a new coal-fired plant every week.)
- **Invest in a clean energy economy.** Obama and Biden will “invest \$150 billion over 10 years to accelerate the commercialization of plug-in hybrids, promote development of commercial scale renewable energy, encourage energy efficiency, invest in low emission coal plants, advance the next generation of biofuels and fuel infrastructure, and begin transition to a new digital electricity grid.”
- **Increase fuel economy standards** by “4% per year while protecting the financial future of domestic automakers.”
- **Invest in developing advanced vehicles and put 1 million plug-in electric vehicles on the road by 2015.** This will require “investing in advanced vehicle technology with a specific focus on R&D in advanced battery technology.” Obama “will also provide a \$7,000 tax credit for the purchase of advanced technology vehicles as well as conversion tax credits.”
- **Mandate all new vehicles are flexible fuel vehicles.** “Sustainably produced biofuels can create jobs, protect the environment, and help end oil addiction.”
- **Develop the next generation of sustainable biofuels**, including cellulosic ethanol, biobutenol, and other new technologies.
- **Promote the responsible domestic production of oil and natural gas.**

Cap and trade revenues subsidize clean energy

\$150 billion over 10 years

Cleaner vehicles

- **Require 10% of electricity to come from renewable sources by 2012.** 10% of electricity renewables by 2012
These include solar, wind, and geothermal.
- **Develop and deploy clean coal technology** such as carbon capture and storage technologies.
- **Safe and secure nuclear energy.** Nuclear represents “more than 70% of our non-carbon generated electricity. It is unlikely that we can meet our aggressive climate goals if we eliminate nuclear as an option. However, before an expansion of nuclear power is considered, key issues must be addressed including...security of nuclear fuel and waste, waste storage, and proliferation.”
- **Deploy the cheapest, cleanest, fastest energy source—energy efficiency.** The Department of Energy (DOE) projects electricity demand will rise 1.1% annually over the next few decades. Obama’s goal is to reduce electricity demand by 15% from the DOE’s projected levels by 2020.
- **Invest in a smart grid** including “smart metering, distributed storage, and other advanced technologies” in order to both “improve grid reliability and security” and accommodate “a tremendous increase in renewable generation.” (More capacity is needed to move electricity to cities and suburbs from wind farms and solar arrays in remote locations.) Smart grid
- **Weatherize 1 million homes annually.**

Clean, Green Energy—A Top Priority in Obama’s First Term

During the presidential campaign, Obama promised to raise taxes on very high earners and redistribute the funds to the less affluent. There is *not yet* any indication he will fail to keep this campaign promise next year. Nevertheless, we think there is a *good chance he will delay tax hikes*. Raising taxes on investors and corporate executives during a severe recession/stock market slump is a pro-cyclical policy that many observers would liken to Herbert Hoover’s problematic tax hikes of 1932. Whether fair or not, an Obama tax hike is likely to be blamed for any continuing economic weakness in 2009 and 2010. It would be a major Republican talking point in the 2010 Congressional elections. It is politically easy to postpone the tax hike, because the current “Bush Tax Cuts” expire at the end of 2010, when the top income tax rate goes from 35.0% to 39.6%.

A second Obama campaign promise—ambitious healthcare reform—also seems unlikely to become law over the next year, when the president will be preoccupied with getting the economy back on track. As we saw in 1993, reforming healthcare is an enormously complex and contentious process. A large and rapidly expanding federal budget deficit will also discourage big new expenditures on healthcare, which would be on the order of \$100 billion annually, according to the Obama campaign.

Delivering on a Campaign Promise

With tax hikes and healthcare reform delayed, we think Obama will take advantage of current economic exigencies to move forward aggressively to

make good on his campaign promise on clean, green energy. Obama has already said he will propose an ambitious economic stimulus package. This will be tough for Republicans to oppose at a time when the private economy is mired in recession. A stimulus package focused on clean, green energy—not just the conventional “roads and bridges”—would enable the new president to deliver on his promise of “change.”

Think Big?

UBS economists believe the package will be *at least* \$150 billion or 1% of GDP. Some economists are advising the president elect to “think big” and propose a much larger package in order to jump start a private economy hobbled by the credit crunch. This is a time for bold measures, they argue. Yes, a \$300-400 billion package would expand the federal deficit—but so would a severe and prolonged recession. Lending credibility to this argument: policy makers and most economists have consistently under-estimated the severity of the credit crunch. Opponents of a giant stimulus package are concerned that it would raise interest rates—unhelpful during a credit crisis, to say the least.

Partly due to the fiscal stimulus package, federal spending is forecast to grow much faster than the overall economy in 2009 on a Q4/Q4 basis. Ten times faster, to be specific. UBS economists expect federal spending to grow 5.0% while overall real GDP grows 0.5%, with PCE rising just 0.2% and business fixed investment declining 6.2%. (See Table 2.)

Table 2: US GDP Growth by Component (Q4/Q4)

	2008	2009
Real GDP (chain)	0.0%	0.5%
Personal consumption expenditures	-1.2	0.2
Business fixed investment	-1.4	-6.2
Residential investment	-19.5	-4.2
Government purchases	2.9	1.4
Federal	6.8	5.0
State & Local	0.6	-0.8
Net exports (\$ bil.)	-312	-283
Change in inventories (\$ bil.)	-57	12

Source: UBS US Economics Team

Whatever its size, a major element of the fiscal stimulus package will be infrastructure spending. Sending checks to households (as was done in Q2 2008) has fewer supporters because the first stimulus package did not stave off recession; critics argue too much of the money was either saved or spent on consumer products manufactured overseas. By its nature, infrastructure spending is domestic. We expect this stimulus package (together with other parts of the 2010 federal budget) to fund such “green energy” initiatives as:

- Research on advanced biofuels, clean coal technology, and nuclear waste storage. (This supports an important Obama constituency, universities.)
- Subsidies for solar, wind, and other renewable energy.

Fiscal stimulus package: \$150 billion-plus

Federal spending far outpaces GDP in 2008 and 2009

- Mass transit projects.
- Building a smart electricity grid.
- Making federal government buildings and vehicles energy efficient.
- Providing subsidies to weatherize homes.

Advice for Obama: Focus, Focus, Focus

A recent BBC article supports the idea that Obama will narrow his focus to just a couple of items, including the stimulus package. Several members of previous administrations believe that, given the cumbersome governmental structure intentionally created by the US Constitution, a new president must do this in order to be effective. John Podesta, chairman of the Obama transition team, states, “Our first priority will be to stabilise the economy and get Americans back to work.” The BBC notes:

A narrowly focused approach would also have the advantage of bipartisanship, according to Robert Shapiro, an economic adviser to President Clinton. He said that green energy initiatives, such as developing hybrid cars and a green energy grid, would attract support from Republicans interested in establishing energy independence, as well as Democrats who want to protect the environment. And they could create jobs, a key consideration in any new programme with 10 million Americans now out of work. The main casualty of the new approach may be healthcare reform. (BBC, *Narrowing Obama’s Policy Options*, November 12, 2008).

The Obama EPA—No Friend of Greenhouse Gasses

Of course, it is not just new spending that will accelerate the energy shift. Under Obama, the powerful Environmental Protection Agency (EPA) will likely be far tougher on dirty fossil fuels than it has been under President Bush. For example, in December 2007, the EPA prevented California, New York, and 15 other states from passing laws restricting CO₂ emissions by cars and trucks, under the 1970 Clean Air Act. According to *The New York Times*, “the emissions standards California proposed in 2004—but never approved by the federal government—would have forced automakers to cut greenhouse gas emissions by 30% in new cars and light trucks by 2016, with the cutbacks to begin in 2009 models.” Environmentalists and the affected states (led by California Governor Schwarzenegger) were outraged by the EPA’s decision, calling it a payoff to the auto industry. Decisions such as this are likely to be reversed once the EPA is controlled by Obama.

The economic changes wrought by an aggressive EPA could be fairly profound. On the basis of an *Advance Notice of Proposed Rulemaking* recently published by the EPA, the conservative Heritage Foundation predicts the EPA will use the Clean Air Act to “regulate emissions of greenhouse gases (GHG) from a vast array of sources, including motor vehicles, boats and ships, aircraft, and rebuilt heavy-duty highway engines. The regulations will lead to significant increases in energy costs.” Not all would agree with the alarmist tone of the Heritage

Some states wish to regulate carbon emissions

Obama EPA could have broad impact on energy use

Foundation, but it is true that EPA regulation will become far stricter under Obama and will have a major economic impact.

The President as Catalyst

The dictionary definition of catalyst is “an agent that provokes or speeds significant change or action.” The economic slump and political momentum of a new administration create an opportunity for Obama to be a catalyst for the clean, green energy theme.

Clean, Green Obama Energy Basket Bbrg.UBS_OBEN

19 stocks, 18 rated Buy

Tables 1, 3, and 4 list 19 stocks in our new Clean, Green Obama Energy Basket, of which 18 are rated Buy and one rated Neutral. All but three of the stocks (Anadarko Petroleum, Cummins Engine, and CSX) were highlighted in a thematic Q-Series[®] report we wrote last May (*Industrials: Energy Crunch Winners?* May 7, 2008). In that report, we detailed how these stocks stand to benefit from the intertwined trends of emerging market industrialization, structurally higher energy prices, and efforts to mitigate global warming. In one way or another, all 19 stocks in our Clean, Green Obama Energy Basket are involved in improving energy efficiency, shifting to cleaner fuels, and reducing carbon emissions. Please note that this Clean, Green Obama Energy Basket *takes the place of an earlier basket based on our May 7 report.*

The stocks in the Clean, Green Obama Energy Basket are heavily weighted to industrials (eight names), energy (two names), and materials (three names), so it is not surprising the stocks have sold off as the global economy has plunged into recession and commodity prices have plummeted. The decline has been painful (down 41 on average this year), but we think this is a good entry point for stocks benefiting from the powerful global secular trend of clean and efficient energy. Admittedly, the stocks may not perform well until investors become more confident the global economy will recover. UBS economists expect US real GDP growth to trough in Q4 2008 at -3.5% annualized growth, and turn positive by Q3 2009.

So far, the profits of the 19 companies in our basket have been impressively resilient, but the recession will take a toll (Table 4). Their median EPS gain was 21% in 2007 (versus 12% for the S&P 500), and UBS analysts expect it to be 23% in 2008 and 10% in 2009. UBS analysts' 2009 estimates are 1% below consensus based on median figures. But the analysts believe this bad news for 2009 is more than priced in; the upside to the 12-month price target averages 58%.

Resilient profits in 2007 and 2008

Table 3: Clean, Green Obama Energy Basket

Name	Ticker	Market Cap \$ billion	Rating	Price	Price Target
Thermo Fisher	TMO	\$13.3	Buy	\$32.54	\$65
PerkinElmer	PKI	2.2	Buy	16.69	26
XTO Energy Corp.	XTO	19.4	Buy	33.27	51
Anadarko Petroleum	APC	17.3	Buy	37.68	66
Questar	STR	5.0	Buy	28.43	64
Cooper Industries	CBE	4.6	Buy	26.47	34
Itron Inc.	ITRI	1.4	Neutral	41.40	55
Cummins Engine	CMI	4.2	Buy	20.60	32
Fluor	FLR	6.2	Buy	33.97	50
AECOM Technology	ACM	2.0	Buy	19.34	22
United Technologies	UTX	47.3	Buy	48.15	73
Union Pacific	UNP	29.0	Buy	57.21	94
CSX	CSX	14.8	Buy	37.58	72
Monsanto	MON	40.7	Buy	74.41	140
Potash Corporation	POT	21.0	Buy	69.15	130
Praxair	PX	18.8	Buy	57.87	82
Entergy	ETR	16.3	Buy	78.37	95
Applied Materials	AMAT	15.9	Buy	10.00	14
First Solar	FSLR	8.4	Buy	115.55	150

Source: UBS; Share prices as at 18 November 2008

Table 4: EPS Growth of Stocks in Obama Clean, Green Energy Basket, 2007-09

Name	2007	2008	2009
Thermo Fisher	40%	18%	10%
PerkinElmer	13	15	12
XTO Energy Corp.	8	2	14
Anadarko Petroleum	-35	39	-80
Questar	11	37	-8
Cooper Industries	22	15	-16
Itron Inc.	33	23	10
Cummins Engine	4	25	-19
Fluor	52	58	10
AECOM Technology	76	22	21
United Technologies	15	16	1
Union Pacific	18	31	20
CSX	22	35	23
Monsanto	na	119	25
Potash Corporation	99	249	36
Praxair	21	18	7
Entergy	25	16	16
Applied Materials	16	-40	-67
First Solar	2290	179	75

Source: UBS estimates

Life Science: TMO, PKI

Addressing climate change is all about cutting emissions of CO₂ and other greenhouse gasses, which must be measured accurately before they can be reduced. **Thermo Fisher**, whose core business is supplying biomedical labs with equipment and consumables, makes equipment that measures emissions of power plants and factories. Along with **Perkin Elmer**, Thermo should benefit from the increased spending on biofuels research. They would also benefit from increased funding for the National Institutes of Health.

Natural Gas: XTO, APC, STR

The US Department of Energy expects electricity sales (in kilowatt hours) to grow 1.1% annually, 2007-17. Currently about half of electricity is generated in coal-fired plants. But if a cap and trade law is passed, regulators will likely be hesitant to approve new coal plants until they have answers to two difficult questions: Will clean coal technology really work? and What will it cost? These issues are also impeding financing of new coal-fired plants.

With new coal generation impeded by cap and trade risk, *relatively clean natural gas is likely to gain share* from coal in the electricity market. Natural gas will also be a preferred fuel in other applications including residential and commercial heating, industrial uses (both as a fuel and feedstock for petrochemicals), and transportation. (There are 150,000 natural gas vehicles in the US and 5 million globally, according to the Natural Gas Vehicle Coalition).

Measuring emissions

Natural gas: gaining share from coal

XTO Energy and **Anadarko Petroleum** are leading exploration and production companies that have been successful at expanding output. **Questar** is a diversified gas company that operates a gas-powered electric utility, natural gas pipelines, and an E&P business.

Industrial Companies: CBE, ITRI, CMI, FLR, ACM, UTX

In various ways, these industrial companies will all be involved in making the global energy infrastructure cleaner and greener:

- **Cooper Industries** makes electrical equipment including transformers, energy-efficient lighting fixtures and lighting controls, and equipment for power grids. Cooper could also benefit from Obama’s “smart” electric grid agenda, albeit to a lesser extent than the pure-play meter companies.
- **Itron** makes smart meters that save manpower and allow utilities to charge customers more during hours of peak usage. It should benefit from construction of a “smart” electric grid featuring, to quote Obama’s website, “smart metering, distributed storage, and other advanced technologies.” A smart grid can better handle variable loads produced by renewable sources in remote locations, such as wind farms and solar arrays.
- Governments around the world are imposing more stringent emission requirements on diesel engines used in trucks, boats, tractors, and electric generators—a plus for **Cummins Engine**. As global emissions standards become more stringent, UBS Analyst Henry Kim believes some original equipment manufacturers may choose to outsource production of engines rather than invest in the incremental R&D needed to product the next generation engines.
- **Fluor**, a leading engineering and construction company, could install scrubbers and build cleaner burning coal plants, nuclear plants, wind farms, solar-polysilicon manufacturing capacity, and cleaner refineries.
- **AECOM Technology Corp.** provides “design, engineering, program management, construction management, and operations and maintenance support” for both governments and corporate customers globally (including the Middle East, a fast-growing market). It handles a variety of infrastructure projects including roads, mass transit, waste water, pollution control, and electrical transmission and distribution. UBS Analyst Steven Fisher reports that last week ACM “acknowledged that if a stimulus package does come through, it could help AECOM exceed the upper end of its FY 2009 guidance.” Fisher raised his 12-month price target 22%.
- **United Technologies** builds jet engines and heating and cooling equipment. Rising energy costs and more stringent emission requirements will increase turnover of the capital stock, as companies buy the most up-to-date, energy-efficient equipment.

Smart meters

Stringent emission requirements on diesel engines

Fiscal stimulus package positive

Cleaner Transportation: UNP, CSX

Railroads are far more energy efficient than trucks, which gives them both a competitive and regulatory advantage. On average, rails are over three times more fuel efficient than trucks in terms of how many miles that can move a ton

Rail: three times more fuel efficient than trucks

of freight per gallon of fuel. **Union Pacific** and **CSX** are currently UBS Analyst Rick Paterson's top picks.

Agriculture: MON, POT

In 2007, Congress dramatically increased ethanol production mandates, and Obama is a strong supporter of advanced biofuels. This is an incremental positive for **Monsanto** (world's biggest producer of bio-tech seeds and other agriculture products) and **Potash** (the biggest producer of fertilizer).

Industrial Gasses: PX

Obama is no friend of conventional, comparatively "dirty" coal but an enthusiastic advocate of clean coal technology. The primary means of preventing coal-fired power plants from emitting CO₂ will be carbon capture and sequestration, which involves gasification of coal, separating out the CO₂, and injecting it into geologic formations. Industrial gas companies already perform a similar service for oil companies that inject CO₂ into older wells for enhanced oil recovery. **Praxair** and the other three leading industrial gas companies are likely to capture most of the CCS business. UBS Analyst Chris Shaw believes that in the 20-year period starting 2015, the industrial gas industry could see incremental revenue growth of 4-5% from CCS.

Beneficiary of clean coal technology

A Cleaner Electric Utility: ETR

Entergy is an electric utility serving parts of four states. It is unlocking the value of its non-regulated nuclear assets (five plants) by spinning them off into a separate company, which will be well positioned as cap and trade legislation drives electricity prices higher. Incumbent nuclear utilities do not appear to be threatened by Obama; his campaign website states, "It is unlikely that we can meet our aggressive climate goals if we eliminate nuclear power as an option." However, before aggressively expanding nuclear generation, he wants to address such problems as waste storage. This would seem to be positive for incumbent nuclear energy companies like Entergy, because competition from newly built nuclear generation may be delayed.

Solar: AMAT, FSLR

Obama wants to require that 10% of electricity come from renewable sources (like solar, wind, and geothermal) by 2012. This is positive for **Applied Materials** and **First Solar**. The world's largest maker of semiconductor equipment, Applied Materials, is leveraging its expertise by making equipment for the solar industry, which UBS expects will represent 30% of its total sales by 2010 compared to 21% now. First Solar will likely remain the lowest cost manufacturer of solar modules by 20-30%, given its highly proprietary cadmium telluride technology. We think this will enable First Solar to be the first to achieve grid parity with traditional electricity costs in 2010.

Who Loses From Clean, Green Energy?

Addressing climate change involves raising the price of energy in order to capture the "externalities" of fossil fuels—that is, the costs to society at large that are not captured in the market price. Even if it is socially desirable, this increase in costs to capture externalities will hurt some groups. We would highlight two:

- **Consumers.** About 9% of total spending by US households is for energy; the figure is 11% for low-income households (earning \$20,000-29,999) and 7% for affluent households earning over \$70,000. (See Table 5.)

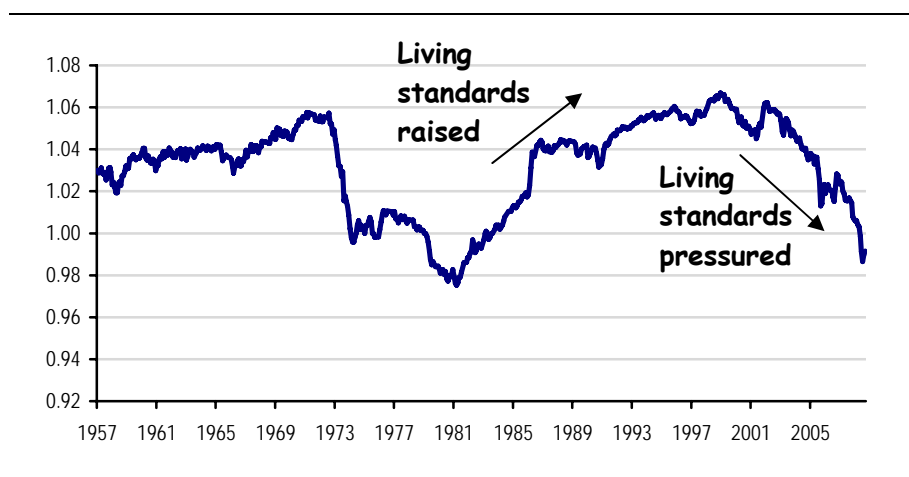
Table 5: Household Spending on Energy, by Income

Household Income	\$20,000 - \$29,999	% of Total Spending	\$70,000+	% of Total Spending	All Consumer Units	% of Total Spending
Average Annual Expenditures	\$29,042	100.0%	\$82,294	100.0%	48,398	100.0%
Housing-- Natural Gas (home heating)	430	1.5%	696	0.8%	509	1.1%
Housing-- Electricity	1,077	3.7%	1,649	2.0%	1,266	2.6%
Housing -- Fuel oil and other fuels	109	0.4%	199	0.2%	138	0.3%
Transportation--gasoline and motor oil	1,580	5.4%	3,319	4.0%	2,227	4.6%
Total Energy Expenditures	3,196	11.0%	5,863	7.1%	4,140	8.6%

Source: Consumer Expenditure Survey, 2006 data

Declining costs for energy and other commodities significantly boosted household income in the 1980s and early 1990s, but rising commodity prices have been a depressant since 2002. This pattern is shown in Chart 1, where we divide the “core” CPI (excludes food and energy) by the “headline” CPI (includes food and energy). When the line is *declining*, commodity prices *are rising faster than core CPI* and are pressuring living standards. Conversely, a rising line indicates commodity deflation is boosting living standards. The absolute impact of energy price fluctuations is sizeable. UBS economists estimate that a sustained \$1 per gallon decline in gasoline prices provides relief from all energy costs amounting to 1.2% of real personal disposable income. It is little wonder gasoline prices have a large impact on consumer sentiment.

Chart 1: Core CPI/Headline CPI



Line declines when food and energy prices (which are in headline CPI) rise faster than core CPI

Source: Bureau of Labor Statistics and UBS

A shift to greener energy will squeeze incomes by raising consumers’ electricity, gasoline, and home heating bills. So it is broadly negative for the consumer cyclical sector, which is also beset by other issues such as:

- Rising saving rate due partly to negative wealth effect of declining home and equity prices;
- Reduced consumer credit due to the credit crunch; and
- Slowing labor force growth as baby boomers retire.

On the supply side of the equation, trends are no better for consumer cyclicals. The consumer boom since 1983 has left the US awash in housing developments, shopping malls, restaurants, movie theatres, casinos, and electronic media. We remain underweight the consumer cyclical sector, as we have been for most of the past three years.

Remain underweight consumer cyclicals

Obama promises to use most of the revenues from cap and trade “for rebates and other transition relief to ensure that families and communities are not adversely impacted by the transition to a new energy, low carbon economy.” This might cushion the impact on some families, but in our view, it would be virtually impossible to move an economy to more expensive energy without reducing living standards. And higher energy costs have adverse secondary impacts, such as moving high-paying energy-intensive manufacturing jobs overseas. Dow Chemical, in its recently published *Energy Plan for America*, states, “Volatile natural gas prices over the past two decades have resulted in a net loss of 120,000 well-paying chemical industry jobs and more than 3 million jobs in the nation’s manufacturing sector.”

Electricity-Intensive Domestic Industries *May Be* at Risk

If the cost of electricity rises as the US shifts to green energy, but many other nations stick with coal, the competitiveness of US operations will suffer. Table 6 shows the 20 US industries for which “utilities” are the highest percentage of total costs, according to the Bureau of Economic Analysis input/output matrix. As expected, industries using large commercial buildings—real estate, lodging, gambling, restaurants, retail, and hospitals—are near the top of the list. We are *not* arguing that higher utility costs are *necessarily* a major negative for all these industries; utility costs are a modest portion of total expenses. But it would pressure the profit margins of companies if they also suffer from weak demand and are unable to pass on rising utility costs.

Cost pressures for firms with large real estate footprint

Table 6: Industries With Highest Utility Costs—Top 20 of 56 Industries (“utilities” as percentage of total costs)

Real estate	8.0%
Nonmetallic mineral products	3.7
Waste management and remediation services	3.1
Accommodation	3.0
Farms	2.8
Food services and drinking places	2.7
Warehousing and storage	2.6
Paper products	2.6
Amusements, gambling, and recreation industries	2.6
Primary metals	2.0
Mining, except oil and gas	1.9
Textile mills and textile product mills	1.8
Management of companies and enterprises	1.8
Food and beverage and tobacco products	1.7
Chemical products	1.6
Retail trade	1.6
Plastics and rubber products	1.5
Other services, except government	1.4
Fabricated metal products	1.2
Hospitals and nursing and residential care facilities	1.1

Source: Bureau of Economic Analysis and UBS

■ Analyst Certification

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UBS Investment Research: Global Equity Rating Allocations

UBS 12-Month Rating	Rating Category	Coverage ¹	IB Services ²
Buy	Buy	56%	36%
Neutral	Hold/Neutral	35%	33%
Sell	Sell	8%	27%
UBS Short-Term Rating	Rating Category	Coverage ³	IB Services ⁴
Buy	Buy	less than 1%	32%
Sell	Sell	less than 1%	14%

1:Percentage of companies under coverage globally within the 12-month rating category.

2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

3:Percentage of companies under coverage globally within the Short-Term rating category.

4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS. Rating allocations are as of 30 September 2008.

UBS Investment Research: Global Equity Rating Definitions

UBS 12-Month Rating	Definition
Buy	FSR is > 6% above the MRA.
Neutral	FSR is between -6% and 6% of the MRA.
Sell	FSR is > 6% below the MRA.
UBS Short-Term Rating	Definition
Buy	Buy: Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.
Sell	Sell: Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.

KEY DEFINITIONS

Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months.

Market Return Assumption (MRA) is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium).

Under Review (UR) Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

Short-Term Ratings reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case.

EXCEPTIONS AND SPECIAL CASES

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Company Disclosures

Company Name	Reuters	12-mo rating	Short-term rating	Price	Price date
AECOM Technology Corp. ^{2b, 4c, 16}	ACM.N	Buy	N/A	US\$19.34	17 Nov 2008
Anadarko Petroleum Corp. ^{2a, 4a, 5a, 6a, 6b, 6c, 7, 16}	APC.N	Buy	N/A	US\$37.68	17 Nov 2008
Applied Materials Inc. ^{8, 16}	AMAT.O	Buy	N/A	US\$10.00	17 Nov 2008
Cooper Industries Inc. ^{2a, 4a, 16, 18a}	CBE.N	Buy	N/A	US\$26.47	17 Nov 2008
CSX Corp. ^{2a, 4a, 5a, 6a, 6c, 7, 13, 16, 22}	CSX.N	Buy	N/A	US\$37.58	17 Nov 2008
Cummins Engine Co. ^{16, 18b}	CMI.N	Buy	N/A	US\$20.60	17 Nov 2008
Energys Corp. ^{16, 22}	ETR.N	Buy	N/A	US\$78.37	17 Nov 2008
First Solar Inc ¹⁶	FSLR.O	Buy	N/A	US\$115.55	17 Nov 2008
Fluor Corporation ^{2b, 4a, 5a, 6a, 6b, 6c, 7, 16}	FLR.N	Buy	N/A	US\$33.97	17 Nov 2008
Itron Inc. ^{2b, 4a, 6a, 16}	ITRI.O	Neutral	N/A	US\$41.40	17 Nov 2008
Monsanto Co. ¹⁶	MON.N	Buy	N/A	US\$74.41	17 Nov 2008
PerkinElmer, Inc. ^{6b, 7, 16}	PKI.N	Buy	N/A	US\$16.69	17 Nov 2008
Potash Corporation of Saskatchewan Inc. ^{2a, 4b, 5b, 16}	POT.N	Buy	N/A	US\$69.15	17 Nov 2008
Praxair Inc. ^{16, 18c}	PX.N	Buy	N/A	US\$57.87	17 Nov 2008
Questar Corp ^{4a, 6a, 16}	STR.N	Buy	N/A	US\$28.43	17 Nov 2008
Thermo Fisher Scientific Inc. ^{16, 18d}	TMO.N	Buy	N/A	US\$32.54	17 Nov 2008
Union Pacific Corp. ¹⁶	UNP.N	Buy	N/A	US\$57.21	17 Nov 2008
United Technologies Corp. ^{4c, 8, 16, 18e}	UTX.N	Buy	N/A	US\$48.15	17 Nov 2008
XTO Energy Corp. ^{2a, 4a, 6a, 16, 22}	XTO.N	Buy	N/A	US\$33.27	17 Nov 2008

Source: UBS. All prices as of local market close.

Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

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