

Post Peak Preparation Checklist

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Many changes are coming...which ones are the most important?

What Are You Preparing For?

Once you've set your mind to being prepared for Energy Descent and Climate Change, your next questions will likely be: but what am I preparing for? What will the world look like in twenty years?

The Scenario

This document will help you prepare by outlining what the future is likely to bring. It's not important that the specific order of what we call pivotal events may turn out to be different than on our timeline. If you prepare for the scenario we outline — and stay generally ahead of each event — you will be better able to thrive in the new world unfolding.

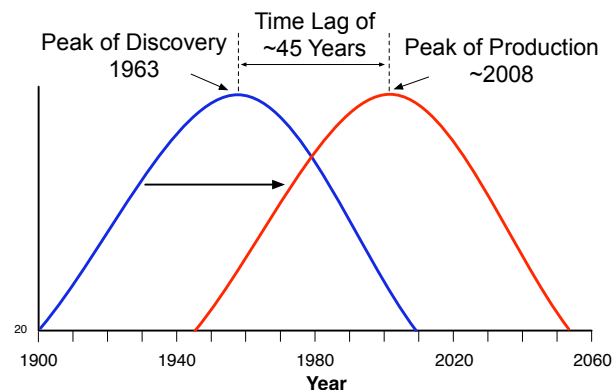


Figure 1. Oil discovery peaked over forty years ago. Currently we are discovering one barrel of oil for every three or four that we use. We have just about reached the halfway point of easily extractable oil and every non-OPEC country is now in decline.

The scenario we've created revolves around important events that we will collectively experience. We roughly follow Orlov's Collapse Model, which is:

- ◆ Financial Collapse
- ◆ Commercial Collapse
- ◆ Political Collapse
- ◆ Social Collapse

◆ Cultural Collapse

Learn Orlov's collapse model at: www.energybulletin.net/node/46667

We think that Orlov correctly points out that financial and commercial collapse are unavoidable but that political, social and cultural collapse are not. Part of our mission is to point this out and encourage people to retain appropriate and create new societal structures as the current ones disappear.

Climate change is such a massive force that any part of the following discussion could be caused as easily by climate change as oil decline. Just as concerning is that virtually every biological system is in deep decline or at the breaking point, whether it is soil depletion, water limits, ocean acidification or any of a dozen other systems.

However, it is now clear that, in the West, the decline of oil will occur before we feel the largest impacts of climate change and the other systemic failures. The impacts have already begun and are now unavoidable.

The Long Decline

As oil depletes the worldwide economy will

decline. Global trade and local trade will be affected. Dr. Hirsch performed some valuable analysis in his paper *Mitigation of maximum world oil production: Shortage scenarios*,

published in the journal *Energy Policy*.

In the paper Hirsch notes that the economy and oil are strongly correlated (see Figure 2). This graph demonstrates how important oil is to the world economy.

There are two general models for how the economy could decline. The first resembles a staircase. Each time oil demand meets reduced oil supply, the price increases and destroys parts of the economy.

Individual businesses go bankrupt and in some cases entire industries drastically shrink or effectively disappear, the first being the auto, airline and housing industries. This is sometimes called "catabolic collapse" and you can read about it from Greer's work (www.energybulletin.net/node/16649). Figure 3 shows how this might work; the first run-up in the price of oil has already brought us down the first stair step.

However, we don't think catabolic collapse can continue for very long before the second method of collapse occurs.

We think this because the economy as currently set up requires growth. From the price of a company's stock to the retirement plans of a billion

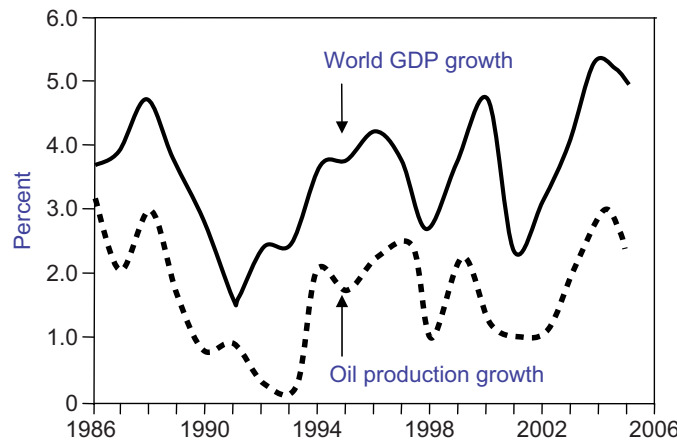


Figure 2. World GDP growth and world oil production growth have generally tracked each other for nearly two decades; data assembled by Deutsche Bank, 2007.

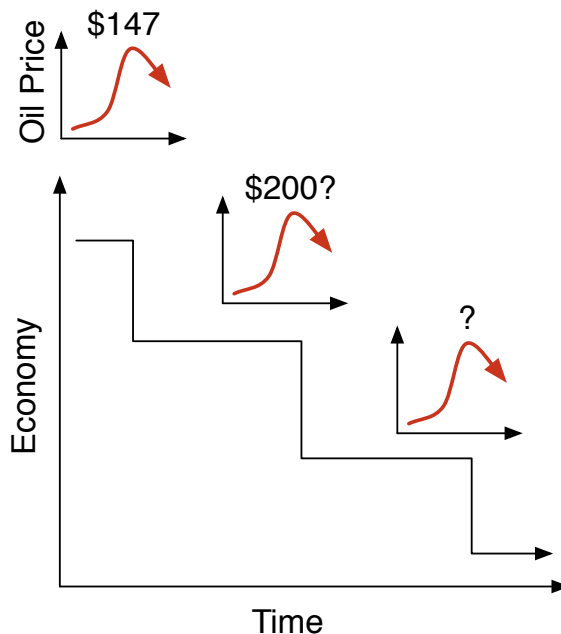


Figure 3. Each time the economy attempts a recovery, the increased price of oil causes another wave of bankruptcies. At some point the system collapses completely because it works only when it can grow.

people to the never-ending need for new workers to pay for social programs, if growth doesn't occur the system breaks down.

A sudden collapse would involve an almost complete loss of trust in the current financial system, which in turn would cause either the currency to devalue (hyperinflation), sudden deflation (making it impossible for many individuals and companies to repay their debts because of reduced income) or banks to cease lending, which is happening now.

What could cause this sudden loss in trust? There are a few candidate events and they are discussed next.

Key Events

Though the future is notoriously difficult to predict, it's still possible to anticipate some events occurring even if we don't know precisely when they will occur. The events likely to occur in the next five years, possibly in the order they will occur, are in the center box.

KEY EVENTS BEFORE 2014

-  **Product selection decreases and social services are cut**
-  **Incomes are cut**
-  **Fuel shortages occur**
-  **Virtual assets become mostly worthless**
-  **Grocery shelves empty**
-  **Some food production is nationalized**
-  **One or more natural or man-made disasters occur**



Product Selection

Decreases and Social Services are Cut

Right now its still possible to purchase almost anything, but as more bankruptcies occur this will change. As global trade slows, we will discover that outsourcing the manufacture of so many vital products was a tragic mistake.

In particular, many people are dependent on high-tech health products and drugs for their survival or well being. If you are such a person, it is especially important to anticipate and plan for scarcity. If you can purchase extra of whatever you require, start doing so now. If

exercise and healthy eating enable you to get off a drug, begin now. Investigate alternative therapies.

-  Find alternatives to drug therapies; get fit
-  Purchase durable, self-repairable products now

Gasoline and Diesel Shortages

When prices for gas and diesel are high enough, shortages almost always occur because the high prices are symptoms of disruptions or other problems in the supply chain. At some point fuel becomes unavailable at any price unless purchased on the black market. This happened in '73 and '79 when people would drive for hours to find fuel. Fuel shortages will cause massive breakdowns in the industrial supply chain, destroying more of the economy. One person quipped that JIT delivery,

formerly "just-in-time," will then come to mean "just- isn't-there."

The impacts will be felt everywhere. How will specimens get from the patient to the lab? How will food be delivered to the store shelves? Any national rationing program would likely prioritize fuel for food growing and delivery, but we will still experience a disruption.

Clearly transportation will be affected if it depends on liquid fuel. Consider moving to an area with good public transportation. Electric scooters have come a long way and are inexpensive when compared to a car. It



Purchase a
bike or electric
scooter

seems that most Westerners have already bought their last car, and it likely wasn't an electric one.

Incomes are Cut

A consequence of reduced economic activity is that from this point forward we will have a surplus of labor. Most people will never again be able to find work they did formerly. Each year as the bankruptcies mount there will be more people looking for fewer jobs, thus driving down wages. This too has already begun.

At the same time, the overwhelming number of jobs that are cut will never come back. You must be nimble and creative to bring in income however possible as you prepare for Energy Descent.

If you are currently providing a nice-to-have service, consider learning a need-to-have service. For example, the proprietor of a pet grooming store provides a nice-to-have service. A farmer provides a need-to-have service. Be aware that even if you provide a need-to-have service, you will have many other people in competition with you.



Learn a need-to-
have skill

With the loss of income comes the possible loss of shelter. In our economic system, there are several ways to lose shelter:

- ◆ inability to pay rent; the landlord will evict you
- ◆ inability to pay the mortgage; the bank will evict you
- ◆ inability to pay property taxes; local government will evict you

When incomes fall, you may need more than one income to keep up the rent, mortgage payment or property taxes. Begin making space for another income-earner if you can. If not, be nimble and be prepared to move. Many people are moving in with family and friends. Consider creating an intentional community (en.wikipedia.org/wiki/Intentional_community).



Begin planning to
live with more than
one income-earner

With less income, servicing large amounts of debt will become difficult if not impossible — so pay it back as quickly as possible. If you have a lot of debt, do not rule out bankruptcy; look into it now so that you can “clear the deck” and begin preparing for Energy Descent with a clean slate. Bankruptcy laws exist for exactly that purpose.



Get out of debt

If your home is worth less than the mortgage owed, it may still be worth living there while you prepare, especially if you can bring in another income earner. But it may not be worth it and walking away may be a good option for you. In most states a home mortgage is in a way “unsecured,” meaning walking away will mean a hit to your credit rating and nothing more. If you have refinanced, this is usually not the case (you may not be able to walk away from the debt) so think carefully before you make any move, including participating in a debt-reduction program offered by your bank or the government. By the way, in our view there is nothing immoral about walking away to improve your position considering what is about to happen; forces greater than us are at work here.

Virtual Assets Become Worthless

Virtual assets are stocks, bonds, cash and anything with no intrinsic value. Real assets are land, tools, etc.

There is only one feature that gives a virtual asset value — the willingness of another person to use it to trade with you. When that disappears, the virtual asset loses all value.

Let's look closely to understand why the current set of virtual assets will become worthless in the near future.

A company uses two methods to raise money to expand its operations. It can issue stock or it can take on debt.

In both cases, money is given to the company in exchange for a future payback. In the case of the stock owner, they believe the stock will appreciate in value and they will be able to sell the stock at a future higher value. The debt holder gives the company money under the agreement that the company will pay it back plus interest in the future.

But what happens when the price of oil increases and wave after wave of bankruptcy occurs?

The debt currently on the books begins to look like it may never be paid back. Eventually it becomes clear that loaning money is a risky thing to do unless there is certainty it will be paid back, which is exactly why the banks are currently hoarding the cash infusions by the Federal Reserve.

That's what is happening to debt. For company stocks, as the price of oil rises and the economy shrinks, it also becomes clear that future profits investors once thought a company would generate will not occur. Without profits the company can't grow. Without growth the value of the stock greatly diminishes. Once it is clear most companies will only decrease in size because the overall economy is shrinking, then the stock is even less valuable — its value will drop toward zero.

In other words, once it becomes clear the shrinking of the worldwide economy is not temporary, that in fact it will continue for the foreseeable future, all virtual assets like stocks, bonds and cash will tend toward zero value. A

consequence of this is that pensions and endowments will disappear, as they are comprised mostly of virtual assets.

Be careful which real assets you choose, too, because in a period of deflation they will also lose value — but at least you'll own them. Even if a real asset like land or a house depreciates in value, you are more likely to make improvements to it than if you rent, like adding insulation or installing alternative energy (solar panels, wind turbine, geothermal heat pump, etc.).



Turn your virtual assets to physical assets before they lose almost all value

Supermarket Shelves Are Emptied

The world food supply is heavily dependent on oil and is currently stretched, with only 50 days of grain in stockpiles. Worldwide, we have used more grain than we have produced in six of the last seven years and hunger is increasing around the world, including in the U.S.

Also, it's been estimated that every calorie of food uses 10 calories of hydrocarbon energy to plant, irrigate, harvest, store and transport it to the kitchen table. As oil production declines, it will mean not only the end of food imported by airplane — we may even struggle to ensure the farm tractors have enough diesel to do their job. In North America there is typically just three to four days of food in the supply chain — this is not much of a buffer at all.

Whether it is from people realizing how dependent on oil our food system is, or some sort of shock to the system occurs (like an oil disruption), or a natural disaster like an earthquake happens, people will react as they do before a hurricane hits — they empty the grocery shelves.

Have a store of at least two months of food in your pantry and preferably six months. Don't be one of the

people caught with an empty pantry, searching from store to store for food. You will have a great deal more confidence with food in the house, too, especially if some portion of that food is freeze-dried, which has a shelf-life of 25 years or more.



Stock your pantry

Food Production and Distribution is Nationalized

With most people's capacity to purchase food severely reduced, we assume that some food production and distribution will be taken over by the government, particularly grains and corn, but also meat.

In this environment, food variety and nutrition will be entirely up to you. To eat healthy vegetables, you will need to grow them yourself or have some other assured supply, like a very close relationship with a farmer who must live within biking distance.

Even if you live in a city, it's possible to grow a great deal of food within the city limits. The city of Paris was a net food exporter at the turn of the last century. They used the French intensive farming method, which is now called biointensive farming.

Learning to grow and store vegetables takes many seasons — begin now.

If you have access to a small amount of land (a nearby abandoned lot has worked for others), consider raising chickens, rabbits, ducks or goats (see www.backyardchickens.com).



Learn to grow and store your own food

Prepare for a Natural Disaster

Natural disasters are common and with climate change are likely to increase, particularly extreme weather events like floods. Some parts of the country are prone to earthquakes, like California, Alaska, Hawaii,

the Pacific Northwest and the New Madrid fault between St. Louis and Memphis.

Create a disaster kit and a go-bag. Keep some cash in the house as well because credit card transactions often can't be authorized and cash machines can't dispense cash after a disaster. Be sure to include a tent in your disaster kit because hotels fill up quickly and your home may be red-tagged, which means it is deemed unsafe to inhabit.

Do not count on the Federal Emergency Management Agency (FEMA) to help you; they often take a week to bring supplies and shelter after an emergency. Also, their capacity to help will be greatly reduced as oil declines.

Many areas will no longer be easily habitable after a natural disaster. Water will no longer work and it will take months and possibly years to restore service, and portions may never get water service back. In the case of areas where a future disaster is virtually guaranteed, choose now whether you will leave there while you have transportation and options or you will leave later, after the disaster has occurred (I'm thinking particularly of parts of California).



Have a disaster kit and go-bag ready



Keep some cash in the house

Summary

As the developed world loses its wealth, we will gradually come to look like what we would now call a third-world country.

We will once again have several generations living in the same home and we will need to rely on each other more.

But the loss of the current economy does not mean that we are helpless or that all is hopeless.

Many people are waking up and beginning to prepare for the decline of fossil fuels, particularly oil and natural gas. Once you begin preparing, you will feel more confident. And the “uh-oh” moment almost everyone experiences *will* go away, leaving you aware but in action.

We lived before the modern world existed and life will continue. Even though it will look much different, there will still be laughing and play and friends and family in a post peak world.

Other Resources

Join our newsletter to stay abreast of the latest preparation news:

<http://www.postpeakliving.com/post-peak-living-uncrash-course>

Take the Six Week UnCrash Course by signing up for the newsletter, above.

Learn how to transition:

The Guide to Post Peak Living

♦ www.postpeakliving.com/guide-to-post-peak-living

♦ www.relocalize.net

♦ www.transitiontowns.org

Read a peak oil primer:

♦ www.postpeakliving.com/peak-oil-primer

Learn about energy:

♦ www.theoil drum.com

We maintain an index of The Oil Drum here:

♦ <http://www.postpeakliving.com/blog/aangel/best-oil-drum-index>

Stay abreast of energy news:

♦ www.energybulletin.net

♦ www.aspo-usa.com

Learn more about how societies collapse from Jared Diamond, author of *Collapse*:

http://www.ted.com/index.php/talks/jared_diamond_on_why_societies_collapse.html

The Checklist

Use this to plan and track your level of preparedness

- ◆ Place this checklist somewhere you will see it often. Some people say that without reminders they let the day-to-day life push their preparation out-of-mind.
- ◆ Not all actions will be appropriate to your situation — **but be suspicious** if you find yourself saying that something doesn't apply to you. Sometimes it will be exactly what you need and you are simply confronted by it.

HEALTH

- Find alternatives to drug therapies See <http://www.postpeakliving.com/guide-to-post-peak-living/health>
- Get fit

PRODUCTS

- Stock your personal library For a list of essential books, see <http://www.postpeakliving.com/guide-to-post-peak-living/quick-kits>
- Buy durable and self-repairable products You find many products at <http://store.postpeakliving.com>

TRANSPORTATION

- Purchase a bike, electric scooter or electric bike conversion kit See <http://www.postpeakliving.com/guide-to-post-peak-living/transportation>
- Get a motorcycle license

SHELTER

- Determine where you are going to live See <http://www.postpeakliving.com/guide-to-post-peak-living/where-should-i-live>
 - Reduce heating and cooling costs <http://www.postpeakliving.com/guide-to-post-peak-living/disaster-preparation>
www.energystar.gov
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The Checklist

Use this to plan and track your level of preparedness

SHELTER (CONT'D)

- Plan to live with more than one income earner
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FOOD

- Learn to grow and store your own food See <http://www.postpeakliving.com/guide-to-post-peak-living/food>
 - Purchase a supply of freeze-dried food (min. twenty year shelf life) The Essential Food Books Kit: <http://www.postpeakliving.com/guide-to-post-peak-living/quick-kits/essential-food-books-kit>
 - Build your food book library
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INCOME AND ASSETS

- Get out of debt
 - Stop funding pensions and 401k's
 - Turn all virtual assets into real assets <http://www.postpeakliving.com/guide-to-post-peak-living/skills>
 - Learn a need-to-have skill
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DISASTER PREPARATION

- Move out of disaster prone area See <http://www.postpeakliving.com/guide-to-post-peak-living/where-should-i-live>
 - Create a disaster kit and go-bag <http://www.postpeakliving.com/guide-to-post-peak-living/disaster-preparation>
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Q&A

Common Questions From the Thinking Person

I've heard that wind/solar/nuclear/ (insert technology here) can provide everything we need. Why can't we create an Apollo project to get us out of this mess?

We can create an Apollo-style project and we should. But we've started too late to avoid a major disruption. Right now, there is no combination of energy technologies (nuclear, wind, solar, biofuels, geothermal etc.) that can make up for the decline of oil and natural gas.

The 2005 Hirsch Report makes it very clear that moving off of liquid fuels will take two or more decades of concerted effort — and we haven't even really begun.

There is now no way to avoid Energy Descent. See the Post Peak Living Peak Oil Primer for more: www.postpeakliving.com/peak-oil-primer

What if there is an energy breakthrough? Won't all this preparation be for nothing?

It's possible that a breakthrough will occur, but it is a poor strategy, in our view, to count on a breakthrough. Not only have many of these breakthroughs been "around the corner" for decades now (i.e. nuclear fusion), there is still the transition period we must go through between when the breakthrough occurs, the commercialization of the breakthrough and then the distribution of the equipment that uses the breakthrough within the populace. It typically takes decades for a new technology to reach most people — and that is when the economy is working well. With a failing economy, this will take much, much longer.
