

While conventional cameras were becoming more refined and sophisticated, an entirely new type of camera appeared on the market in 1948. This was the Polaroid Model 95, the world's first viable instant-picture camera. Known as a Land Camera after its inventor, Edwin Land, the Model 95 used a patented chemical process to produce finished positive prints from the exposed negatives in under a minute.

The concept of digitizing images on scanners and the concept of digitizing video signals predate the concept of making still pictures by digitizing signals from an array of discrete sensor elements. At Philips Labs. in New York, Edward Stupp, Pieter Cath and Zsolt Szilagyí filed for a patent on "All Solid State Radiation Imagers" on 6 September 1968 and constructed a flat-screen target for receiving and storing an optical image on a matrix composed of an array of photodiodes connected to a capacitor to form an array of two terminal devices connected in rows and columns. The Fuji DS-1P of 1988 was the first true digital camera that recorded images as a computerized file.

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### **PROMISING ALTERNATIVES: PELLETS**

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Wood pellets is the normalized cylindrical pressed product of the residual dried wood, such as: flour from of woodworking machines, chips and remnants of forest timber. Wood pellets are produced without chemical fixative at high pressure. Wood pellets are a source of a renewable energy produced from a variety of wood waste products. This fuel is manufactured in an established production process. The majority of this fuel is consumed in household heating stoves but there is a growing world market for other uses such as large scale electricity generation in Sweden.

The pellets themselves have a cylindrical form from 6mm to 8mm diameter and must not be longer than 38 mm (1.5 inches). Thus formed, they are an easily managed, free flowing, virtually dust free fuel.

Wood pelleting today is a niche market with the resultant advantages:

1. there will always exist favorable financial factors in the given marketplace;

2. wood pellets are a renewable energy source and thus fit well in government directions in this area;
3. there are significant environmental advantages of wood waste pellets; these vary from reduced leaching of waste wood piles to reduced air pollution problems (low greenhouse gas emissions);
4. one of the major advantages of pellets - a high and constant bulk density, which allows relatively easy to transport this product free flowing on long distances;
5. thanks to the regular form, small size and uniform consistency of the product granules can be poured through a special hose which allows you to automate the processes of loading and unloading and also burning this fuel.

Thus wood pelleting is an established commercial process, and has great potential as a fuel, particularly as the marketplace itself changes from the rapidly varying pricing of other fuels and the impact of environmental concerns.

Pellet mills in Belarus are few. All pellets factories were set up with very tough budget limitations. As a result most or all of them are using domestic, second hand equipment. According to the managers of the Belarusian companies there is no domestic market at the moment. Belarusian consumers are not ready yet to use pellets as a fuel. The point is that special equipment is needed for burning pellets and pellets boilers are still rather expensive. Most companies export pellets to Europe and mostly through Baltic states.

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### **SPACE ENERGY**

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There is one place where the power of the sun remains unattenuated by the messy conditions on the surface and uninterrupted by the day-night cycle. The Earth's orbit receives a solar flux of 1,400 watts per square meter, and a space-based solar power system would take full advantage of this energy source.

The idea of space-based solar has been under development since the 1970s.