Solar Power for the Increasing Population

The year is 2107. Amidst the last glimmering rays of the summer sun, three forms glide down the long metallic ramp, their silhouettes outlined against the darkening sky. Miles from the city center this event is witnessed by only a select few. Their eyes are the first to gaze with awe and trepidation at the site of the eerie, hovering aircraft that had slowly descended down from the heavens, as if directed by the beams of the setting sun. The three forms are quickly rushed into an ominous black SUV that zoomed away through the sky, whirring as its electric engines compensated for the lack of solar energy in the nighttime sky.

The next morning, hordes of cameras are solar-charged and ready for filming and the incessant tapping noise of reporters testing their microphones fills the interview room. Whole households are gathered in front of their holographic televisions ready to witness humankind's first broadcasted communication with extraterrestrial life in over 200,000 years. Since the return of Apollo 2090 ten years ago, the world has been preparing for mankind's first scheduled meeting with "aliens." Those nearing eighty years old took extra care of their health for the next few years, making sure that they would sit with their children and their grandchildren and the grandchildren of their children to witness this momentous event. All of the world's people, all 11 billion of them were waiting.

A hundred years ago, population and global trends analysts had predicted that the population would peak after just 60 years at 9 million, but for the last 4 decades the population continued to gradually climb, propelled by new breakthroughs in science and technology that could only have been flickers of dreams a century ago. The technique of solar energy collection had been perfected decades ago so that this growing population, unchecked by natural selection or the characteristic "S-shaped" curve of most populations, could be fueled by an unlimited supply of energy from solar radiation. At 1000 watts per square meter, solar energy constituted over half of the world's main energy supplies. With a growing population and longer life expectancy of 85 years, human's were at risk of overcrowding the earth and depleting its natural resources. As soon as scientists and engineers realized this encroaching disaster, they began massive studies on developing efficient and inexpensive photovoltaic cells to harvest the sun's unlimited energy supply , knowing that coal and other fossil fuels would soon be gone, that nuclear energy created excessive hazardous waste, and that hydroelectric power threatened the precious environment that would need to be preserved if humans were to continuing living in it. After the perfection of solar power and the securing of a sustainable environment on Mother Earth, people finally began thinking about space exploration. And now they were ready to share their story of engineering brilliance with their foreign neighbors a galaxy away.

A hush fell upon the interview room as the three creatures entered the room shrouded in cloaks of oddly fluid-like material. There was not even the hum of electrical wirings or crackling static from the microphones since the sun was a dazzling glow of energy outside, powering all the systems within. The roofs of the building and of the cars

were all glazed with an impossibly thin coating of titania, an organic compound used in the nanotechnological development of inexpensive solar panels. Satellite as well as household panels were no longer made of the expensive silicon used in the 21st century and could now store excesses of energy for use after sundown. The use of limited resources like silicon, nuclear chemicals, and coal had drastically reduced in the last decade as people grew more aware of the imposing threat of a booming population coupled with resource depletion.

The three creatures floated down into their seats, gazing calmly with intent eyes at their curious surroundings, while the reporters and interviewers gazed dumbfounded at their curious guests. An informal form of communication commenced, with hand gestures and facial expressions only vaguely understood by both sides. After a few minutes of unsuccessful gesturing, the frustrated interviewers stopped to cool off from their frustrating “conversation,“ gathering in front of the solar powered air conditioning system. When they took their seats again, they seemed less agitated and more focused, ready to take on the task of intergalactic communication with the aliens once more. Obviously, conversing with extraterrestrial life forms was going to be more difficult that perfecting solar power technology for the entire world.

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