

The large hydroelectric plants built directly by the government in the Amazon, financed by it or in which it is a shareholder, are suffering from what economists usually call a “market shock”. Built according to flexible physical and financial schedules, to say the least, their budgets are always changed, always upwards, and the deadlines, initially planned, are extended – invariably for longer.

The problem is that, with the regulatory agencies in action and the rules of the capital market, through which these companies roam in search of money, this negligence, so to speak, or official permissiveness is starting to take its toll. And it is taking its toll in all directions, with stray bullets and also so-called friendly fire.

Strict standards for monitoring the implementation of these mega-plants and the start of their operations, which need to be spaced out in order to be able to adjust to the conditions of water use on a gigantic scale. The projects are starting to send out warning signs and even signs of problems.

Today’s Folha de S. Paulo reports that the Jirau hydroelectric plants on the Madeira River in Rondônia and Belo Monte on the Xingu River in Pará could experience the same crisis as the Santo Antônio plant, which is next to Jirau, if the government does not change the rules governing the operation of turbines.

The newspaper explains that, according to current regulations, the plants are required to meet a target for the availability of their machines. This is the time, in one month, in which this rate is measured by the time it takes for them to start operating, from the moment they are installed in the powerhouse, under the command of the ONS (National Electric System Operator), a federal government agency.

If the turbine does not reach its full nominal capacity within the established time, the energy concessionaire receives a fine, which is quite high. The problem, according to company representatives who told Folha, is that plants like Jirau, Santo Antônio and Belo Monte, because they do not have large volumes of water stored in their reservoirs and operate practically on the natural slope of the river, will only be able to reach these rates when all of

their turbines are operating.

In Jirau, only 13 of its 50 turbines are operating normally. Santo Antônio has 32 of 50, with 91% availability. “Reaching this goal is a fantasy,” declared the president of Santo Antônio Energia, Eduardo de Melo Pinto.

The problem is that the nominal power of the plants is not reached immediately. They need a longer period, two or three months, to reach their goal, which will only happen when all of them are online. Until then, generation will be below a value close to 100%. The government, however, demands that this goal be reached as of the operation of the first turbine, years before the project is completed.

In Belo Monte, the machines will have to be 100% available in the main powerhouse, where 20 of the largest turbines in the world will be installed, with a higher power than those in Tucuruí, and 94.46% compared to the lowest power, the bulb turbines in the Pimental reservoir, upstream of the Xingu River.

Norte Energia, responsible for the plant, told the newspaper that it will meet the target, but that it will “adhere to market rules” in cases of delays or unplanned shutdowns.

The punishment for plants that do not meet the targets is applied to the time during which the turbines are unavailable. The amount of the fines follows the price of energy on the market. “Due to the massive use of thermal plants this year, this price is close to the ceiling (R\$823 per MWh), which makes the bill billions – the company responsible for the Santo Antônio plant, for example, says it will lose around R\$2.3 billion”, reports Folha.

Energia Sustentável do Brasil, responsible for Jirau, claims that it is impossible to meet the target and is waiting for the analysis of the Santo Antônio case by Aneel (National Electric Energy Agency) to decide what to do. The plant’s expenses are making the project “uninteresting to the shareholder, who is already at the limit of exhaustion”. Santo Antônio had to make three calls to increase its capital so that it can meet its obligations. But the third call has not yet been answered. Folha predicts that in Belo Monte, where the turbines are still



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## Crisis in the Amazon hydroelectric plants

being installed, “the rules may already have been changed by the time the operation begins. If this does not happen, experts predict the same problems as in Santo Antônio and Jirau”. The problem becomes more complicated because the shareholders of the three giant power plants include official banks, state-owned companies and federal pension funds. The money of those who need adequate remuneration to meet their legal obligations is beginning to be threatened. Or at least the guarantee of its return becomes uncertain and unknown.