

---

# Patagonian sun turned into water

## The situation

Large distances are a characteristic factor in the southern end of the Argentinean Patagonia. This makes it a real challenge to install traditional energy sources there. Clean energies solve this problem and many times this kind of solution can even make automatic a daily task.

This was exactly the case at San José ranch, located in Guer Aike, 110 km North West from RíoGallegos, Santa Cruz province, Argentina. That is where a family has been working on extensive ovine cattle farming for the last 60 years. This typical Patagonian establishment holds 9.000 sheep in its 36.000 hectares. Production is based on rational usage of natural resources while breeding livestock in a sustainable way.

## The solution

Guided by this way of leading a business, some years ago the owners of San José ranch had invested in renewable energies to get groundwater for cattle drinking. Since then the task is carried on by 3 SQ Flex pumps. Encouraged by the good results, a step further was taken and a CR Flexpump was installed to irrigate a pasture.

The selected CR Flex 5-5 gets the necessary energy from 6 Grundfos solar panels of 100 watts each, connect in series. A Grundfos IO50 controller completes the set up. The pumping system was installed 4 m from the Coyle river bank, with 1 m level difference at the aspiration, where a non-return valve was included.

Water thus captured by the CR Flex is driven by the same pump 70 m from the aspiration point and it is used to irrigate by flooding a 2 hectare pasture of Ryegrass.

---

### TOPIC:

Renewable energy, clean energy

---

### LOCATION:

Guer Aike, Argentina

---

### COMPANY:

San José ranch

---

Previously this task had been done by a pump that had a 4 hour autonomy while using 4 l of petrol. This implied the need of keeping a supply of fuel in the ranch.

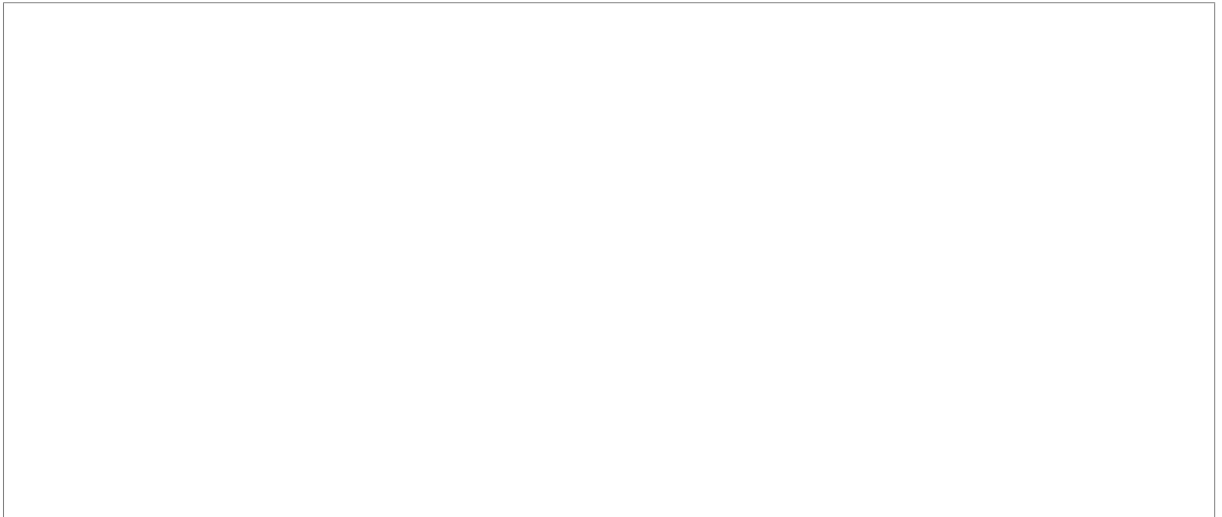
#### The outcome

The complete independence of the new Grundfos pump makes it possible for the pasture to get water during the day without the need of pouring fuel in the old pump and turning it on every day. Today the irrigation is made during daylight hours.

*“Now I don’t need a person to go everyday up to the pump to turn it on and I’ve been able to eliminate the cost of fuel to make it work. I’m very satisfied with the flow obtained”*, comments Mr. Fernando Barcena, administrator and owner of the ranch. Mr. Fernando Barcena was so pleased that more CR Flex pumps were later acquired for the same establishment.

The dimensioning of the system was made based on the Grundfos online dimensioning tool. The city chosen for irradiation calculation purposes was Río Gallegos. A 2 m discharge height was considered in reference to the pumping system. Software calculations indicated a daily flow of 50.000 l/day during spring and summer, which is the period of irrigation for the pasture.

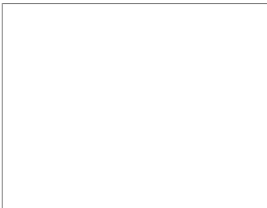
## Additional Images





---

## Related Products



### CRFLEX SOLAR PUMPING SYSTEM - RENEWABLE ENERGY

Grundfos solar surface pumps provide the perfect sustainable, reliable and cost efficient alternative to irregular water supply solutions in remote locations, or for highly specific applications anywhere.